USECHAIN

The First Mirror Identity Blockchain Ecosystem

Project Whitepaper V2.0

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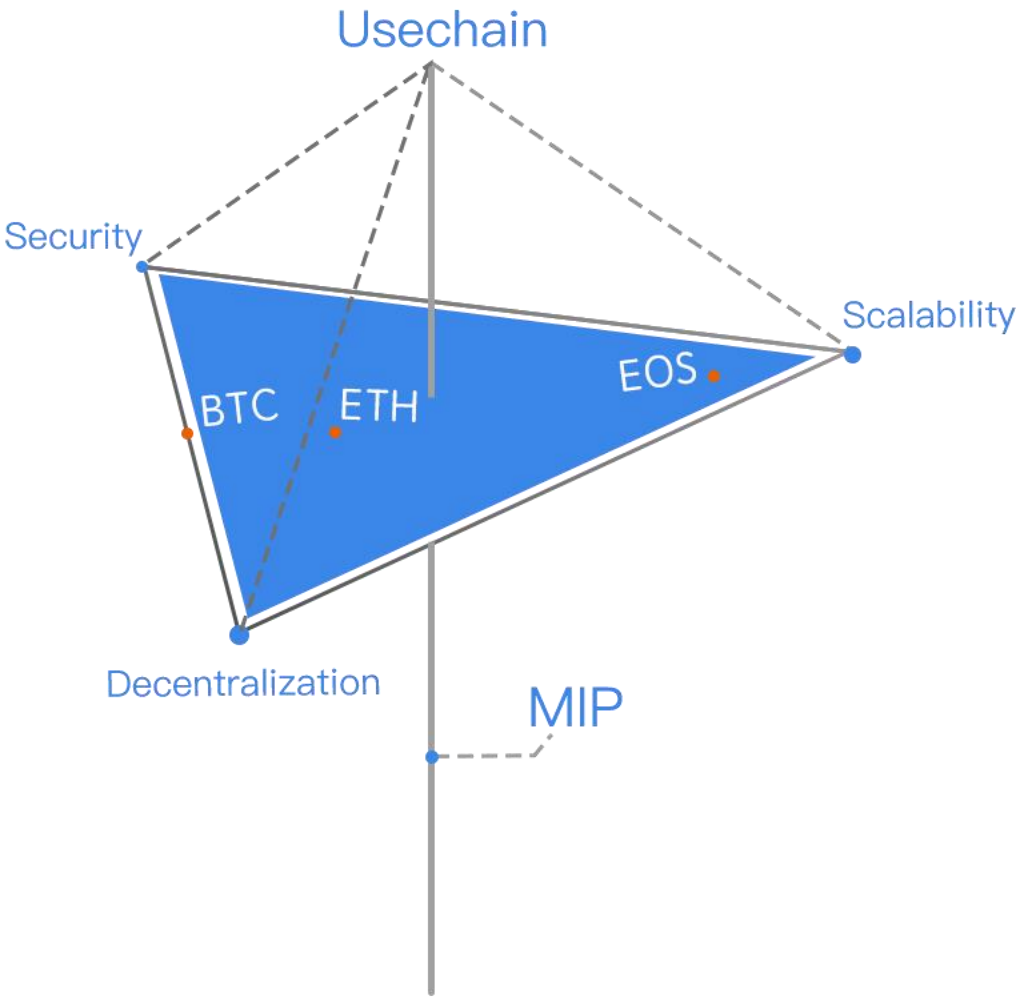
EXECUTIVE SUMMARY

Usechain is dedicated to developing the first mirror identity blockchain ecosystem. Based on existing technologies in blockchain, Usechain becomes the first public blockchain to be built on Mirror Identity Protocol and integrated with multi-level innovations in technology and structure design, which can be used to break the bottlenecks in the development process of blockchain, provide infrastructure of technology for the virtual and parallel world in the future, build an identity blockchain system built on a new technical structure, develop more widely used Dapps and provide underlying technical support for the application explorations in finance, consumption, entertainment, socialnetworking, games, IoT, supply chain management,asset management and social management and add more value to identity by allowing people to be connected to the financial service provided by Wallstreet in an easy, convenient and instant way.

Under the precondition of same security level for privacy between identity blockchain and anonymous public blockchain, Usechain can provide infrastructure with support for Dapps applied in various industries by MIP and the separation of identity and identity verification based on zero-knowledge proof. At the same

time, through multi-level innovations in technology and structure design, Usechain can solve the Impossible Trinity from the new dimension of identity and reach a perfect balance among scale, security and decentralization. With support in academic and commercial resources from top business schools, Usechain will work together with established companies from various industries to attract massive users and boost the fast development of Usechain ecosystem.



Compared with current mainstream public blockchains like BTC, ETH and EOS, Usechain solves the Impossible Trinity among scale, security and decentralization and provides a new way to design the application scenarios based on massive use of identity since it is built on MIP and receives multi-level reorganizations in underlying level of blockchain.

	Usechain	Bitcoin	Ethereum	EOS
Consensus	RPOW	POW	POW	DPOS
Security level	Higher	High	Higher	Low
Performance	Thousands TPS	7 TPS	25 TPS	Thousands TPS
Decentralization	Yes	Yes	Yes	Partly decentralized

Usechain takes adding value to identity as the core idea and aims to build a new commercial model of blockchain based on MIP and the multi-level reorganizations in underlying level, which will go far beyond the traditional models like “identity data economy” and “identity trust model”. Usechain will support decentralized Dapps in future inclusive financial services. For example, a seamless channel between real and digital world can be built by personalized identity token, thus making it possible to turn people,

organizations even assets into identity tokens. High-performance and decentralized exchange in Usechain ecosystem makes it possible for values in any forms to flow and operate efficiently. Every people are accessible to easy, convenient and instant finance service provided by Wallstreet on blockchain.

As the first identity mirror blockchain ecosystem, Usechain will continually build the platform and input high-quality resources based on solid technology foundation and commercial and academic support from top business schools, at the same time, Usechain will promote the development and iteration of commercial projects together with leading commerce and application platforms in various industries, gradually form a blockchain economy system to improve industry efficiency. To accelerate the development of Usechain ecosystem and lead the industry into blockchain 3.0, we will work with community.

PART I

INTRODUCTION

1. Blockchain Industry

Blockchain technology and industry have made great progress since 2009. Bitcoin and Ethereum have brought about innovative ideas and concepts such as“decentralized currency” and“smart contracts” into the world of blockchain technology. The potential blockchain and cryptocurrency have allowed society to be autonomous and secured. However, performance inefficiency, poor scalability and high technical threshold have limited blockchain technology to only be applied in cryptocurrency trading and exchange. Although many underlying blockchain communities have made tremendous contribution to optimize the technology, blockchain has not yet to be adopted by the mass market like Internet because of the lack of commercial support and weak connection with market. The potential huge market value of blockchain industry has not been fully recognized.

2. Blockchain Industry Bottlenecks

The birth of Bitcoin started the era of blockchain 1.0. A finite total supply and a declining production make Bitcoin a store of value and digital gold chased by investors. However, Bitcoin is also widely criticized for low transaction performance and high consumption of power.

Blockchain 2.0 is based on Ethereum. Though the exchange of different cryptocurrencies becomes easier and is not limited in Ethereum using smart contracts, Ethereum also proves to be an effective crowd funding platform which provides a channel to connect blockchain technology and industry development with capital investment and a gateway to develop and build blockchain industry globally.

Apart form token creation and distribution, Ethereum has not yet to provide a platform for value exchange that can be adopted by the public in their daily life. Many blockchain companies are continuously exploring the solution with actual commercial value for blockchain technology.

In the world of blockchain, people need an ecosystem that can be adopted into their daily live , support various transaction scenarios and bring value to the public. Presently, there are many bottlenecks in the development process of blockchain technology and cryptocurrency. The 3 major problems are listed as below:

Low performance

Even though existing blockchain networks such as Bitcoin and Ethereum play a crucial role in blockchain ecosystem. However, they have not yet been adopted into people's live like how Alipay does. Under the existing blockchain technology structure, Bitcoin and Ethereum can only support 7 and 25 transactions per second respectively, which are tremendously low as compared to the number of transactions that VISA supports. The slow transaction speed of existing blockchain systems makes it difficult for mass market adoption.

Anonymous environment

In the existing blockchain industry, the core of blockchain technology application is center upon the term anonymity. The on-chain address of cryptocurrency account does not have any association with the real identity off-chain, making it a channel for criminal activities such as money laundering, drug trafficking, smuggling and illegal fundraising. Most applications under daily scenarios need the support from KYC and AML so that existing anonymous cryptocurrency need get approved to be applied for a wide range of applications.

High technical difficulties

Currently, it's still difficult to build mainstream decentralized applications that can be flexibly and swiftly deployed on existing blockchain platforms. The development of underlying public blockchain has high technical difficulties that requires the support of multidisciplinary and technological resources.

The stage that current blockchain technology is in is similar to the early stage of Internet, which means It is by a small crowd of enthusiasts. However, due to technical bottlenecks and complications, it is difficult for mass adoption. Hence, there is no public blockchains, cryptocurrency or decentralized platforms that have been widely adopted. Currently, the centralized solutions still dominate the market and our society.

3. Vision

The rapid development of blockchain industry and technology focuses on the characteristics like transparency, security, decentralization, irreversibility, network consensus, etc, which has laid an ideal foundation for large-scale transmission of value.Internet makes large-scale information transmission possible. We believe large-scale transmission of value should be as easy as transmitting information and the security during transmission will not compromise. With more global communities established, the participation and resources investment are pushing the whole blockchain industry to blockchain 3.0. It is believed that blockchain 3.0 is the era when blockchain is the mainstream technology to change the way how human explore and innovate the development mode. Also, It's the time when large-scale ecosystems taking blockchain as the infrastructure and decentralization as the core foundation will expand sharply, users are reached by large-scale Dapps and cognition of human will be thoroughly changed.

To increase adoption and utilization of blockchain technology, cryptocurrency and its underlying blockchain system need to be improved in:

- **Performance and scalability :** Provide efficient transaction process management and support for millions of Dapps and billions of users.
- **Identity-based :** Establish a connection between the on-chain addresses and the off-chain identity to meet requirements of KYC and AML, making it possible to be massively adopted in daily consumption, loans, insurance, etc.
- **Low technical barrier :** The continuous optimization and enhancement of smart contract, more sophisticated and flexible definition of application protocol and promotion in accessibility can provide a user-friendly interface for existing Internet technologies and low-cost and low-risk docking mode for mature technologies.

The Usechain foundation is establishing the first blockchain ecosystem that satisfies the above conditions and can be applied to the mass market. The system has features like a new underlying framework of blockchain technology and real identity. It is also built on a high-performance, secure and reliable infrastructure and can transmit massive value.

Based on solid technological foundation, and the high-performance and secure infrastructure centering on sole identity mapping, Usechain will be able to be applied to a wide range of applications scenarios requiring identity. With the competitive advantage from commercial field and renowned business schools, Usechain can continue inputting high-quality resources and uniting leading companies and application platforms under the motivation of Usechain foundation, assisting the global community to stimulate the development of the Usechain ecosystem and leading the industry into blockchain 3.0.

As the Usechain ecosystem continue to be improved, the behavioral data generated by people, events and objects within the identity-based ecosystem will be transparent, open and irreversible. Under the precondition of privacy security, traditional identity information changes from being scattered and fragmented to being aggregated to individual-based. Individuals can create value in the ecosystem by continually investing time, attention, assets, etc. and get returns from the ecosystem. The identity value in the ecosystem will be given back to owners who possess the original rights after all participants reach a consensus, which will eliminate oligopoly and interests center making it a possibility to truly build a decentralized“virtual society”.

PART II

TECHNICAL ARCHITECTURE

Due to numerous bottlenecks in efficiency and usability, it is difficult to use existing blockchain platforms to create applications scenarios for mass market.

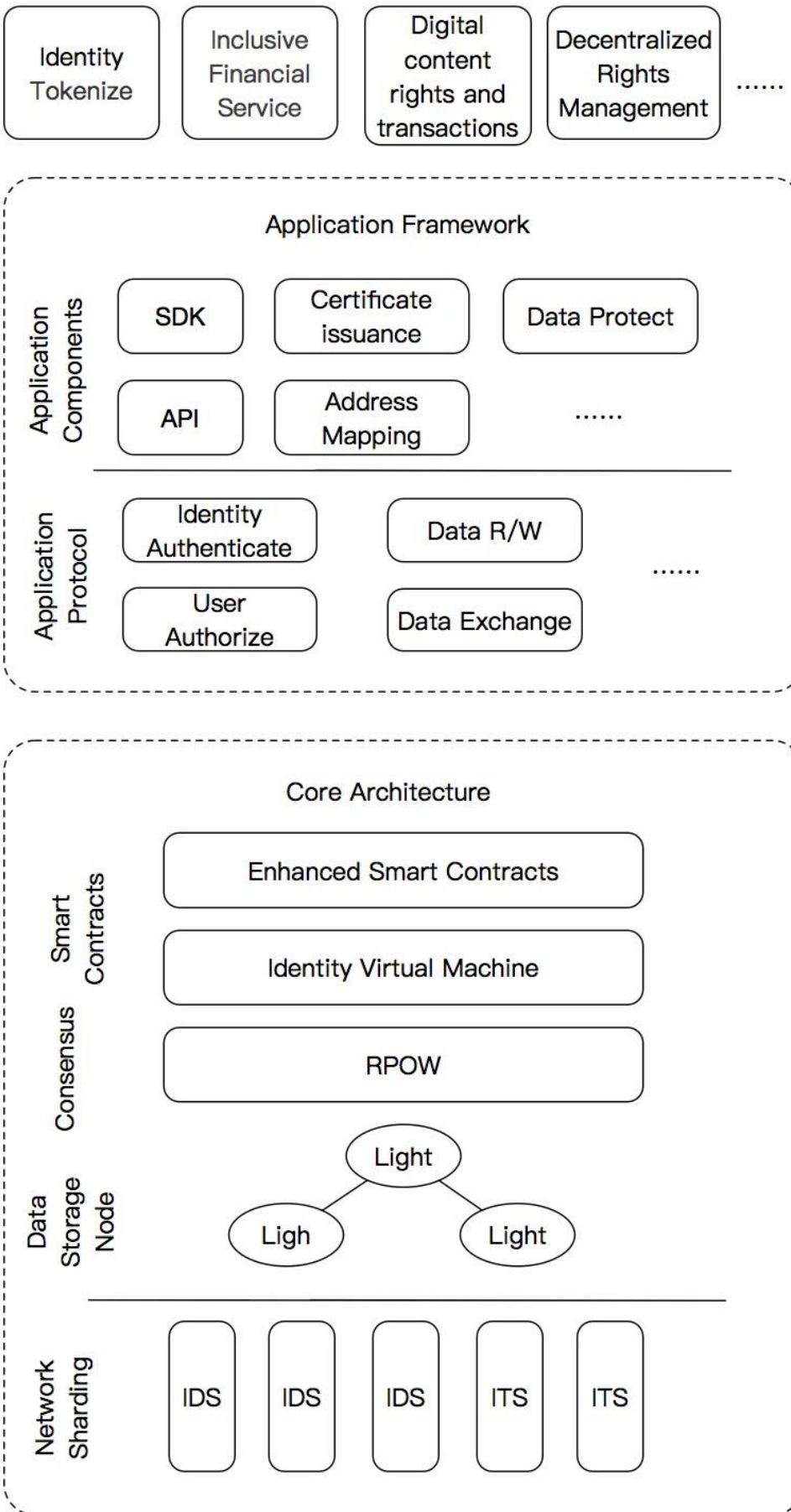
1. Design Objectives

Usechain will develop the first mirror identity blockchain ecosystem by starting from design innovation from the perspective of blockchain infrastructure. This is to improve efficiency of transaction verification to meet infrastructure requirements for mass market application, decrease deployment cost of smart contracts and increase the flexibility and usability of them. Besides, virtual machines will be optimized to simplify development and commissioning process, reduce resource consumption and lower barriers to participate in.

Usechain will be designed to handle large-scale transactions to meet demands from millions of users at the same time and to manage the huge range of commercial and social applications on the platform.

2. Architecture Design and Innovation

The architecture design of Usechain includes application service, application components, application protocol and core framework of underlying public blockchain.


Identity Tokenize
Inclusive Financial Service
Digital content rights and transactions
Decentralized Rights Management
.....
Application Framework
Application Components
SDK
Certificate issuance
Data Protect
API
Address Mapping
.....
Application Protocol
Identity Authenticate
Data R/W
User Authorize
Data Exchange
.....
Core Architecture
Smart Contracts
Enhanced Smart Contracts
Identity Virtual Machine
Consensus
RPOW
Data Storage Node
Light
Ligh
Light
Network Sharding
IDS
IDS
IDS
ITS
ITS

To achieve the vision and goal of Usechain, including improving the transaction efficiency to support its platform applications in the mass market. The Usechain foundation proposes an innovative solution for blockchain that Usechain will be based on mirror identity which and include innovations in both security and performance.

The innovation in design can be divided into network layer, data layer, consensus layer, incentive layer and smart contract layer. Each level can serve for a certain quantity of applications, meet the specific needs of different applications, and provide foundation for individuals and enterprises with the possibility to quickly and securely implement various application and business models with low cost. Some of the key innovations are designed as follows:

Multi-level authentication mechanism

Using cryptography solution, Usechain establishes a multi-level correspondence mechanism between the on-chain address and the identity of authenticated users. Only mapping relationship is recorded on the chain, and no other information is exposed, which completes the authentication process without damaging privacy security.

RPOW consensus mechanism

Based on current algorithms and secure, high-performance, and anti-attack Trusted Execution Environments (TEEs) built by hardware, the Randomized Proof of Work (RPOW) consensus algorithm can achieve high-frequency transaction verification on the premise of a lower energy consumption and fair environment for mining. At the same time, through the combination of decentralization and distributed ledger, it is possible to communicate synergetically and resist attacks. At the same time, it can reach the level required by application in terms of scale, speed, and cost.

Network sharding technology

With The KaZaA P2P protocol introduced, Identity Network Sharding (INS) and Identity Transaction Sharding (ITS) strategies designed, network sharding can be realized based on the account address of users. The transaction of a specific address can be confirmed within the sharding which the address belongs to, which erases the need for confirmation by all nodes in the network. In that way, transaction can be confirmed in shorter time and bearing capacity will also be increased under the condition of resisting double-spending attacks.

Identity Virtual Machine

The Identity Virtual Machine (IVM) is a new standard for building high-performance smart contracts that can be defined and sandboxed with some adaptations. Usechain will build an intermediate communication layer so that IVM can interact with the underlying blockchain, external APIs, and sub-chains, or even be directly programmed based on the intermediate communication layer to make up for the shortage of Ethereum virtual machine and build smart contracts which are efficient in execution , and can interact with external data to help extend the application scenarios.

Light node client

The adoption of higher-level Merkle Tree BCMT is used to achieve transaction and status verification, reduce the amount of data light-node clients need to synchronize and verify the accuracy of transactions or data.

Online fault tolerance

When a specific node encounters a conflict or fork, the disputed accounts and blocks will be frozen based on the sole identity mapping. Other nodes as will continue the usual transactions and generate blocks. The disputed blocks and accounts will be judged by a specialized committee board.

For more technical details,
please download the Technical White Paper

3. Innovative Solutions -- Consensus Algorithm Revolution

Usechain is using blockchain technology to achieve genuine commercial value and contribution to society. It analyzes Bitcoin and Ethereum network from multiple perspectives iincluding security, performance, risk, resources investment and user's participation. Usechain combines the different technical and competitive advantage of existing blockchain models, and proposes one of the most feasible consensus algorithm called Randomized Proof of the Work (RPOW) based on identity mapping to explore a new solution for blockchain.

As the first mirror identity blockchain system, not only lowers the risks and problems brought by the fact that some individuals will control most of the nodes because of the overflow of anonymous addresses, but also brings possibility to the consensus algorithm of RPOW.

To maximize the commercial value and social contribution, Usechain undergoes comprehensive upgrades in the following aspects, which makes it different from all existing mainstream technology in blockchain:

- **High-level Security:** Based on POW, random algorithm with intellectual property rights can reduce the centralization degree of hashing power. It can also resist double-spending attack and attack started by 51% hash power and greatly reduce the probability of fork, which ensures the security and impartiality of network to the most degree.

- **High Performance:** Through random algorithm, Every block will give different difficulty to all miners to adjust the distribution of virtual harsh power, which can dramatically increase the efficiency of transaction confirmation based on POW and lay the foundation for realizing the consumer use.

- **Low Energy Consumption:** Based on the characteristics of identity mapping, the blockchain network can greatly reduce the dependence on hashing power and reduce the consumption of computing resources and energy consumption.

- **Public Participation:** Under the precondition of being secure and efficient, Usechain will be able to support mining through mobile devices due to low resource and energy consumption, allowing the public to participate in the ecosystem.

In the future, Usechain will build secure, high-performance, attack-resistant and hardware-based Trusted Execution Environments (TEEs) to achieve a high-level consensus algorithm of RPOW to further enhance security and performance. The hardware will be adopted into people's daily life and widely applied on mobile devices such as phones, Pad, PDA or even smart watches, bands and other smart devices.

PART III

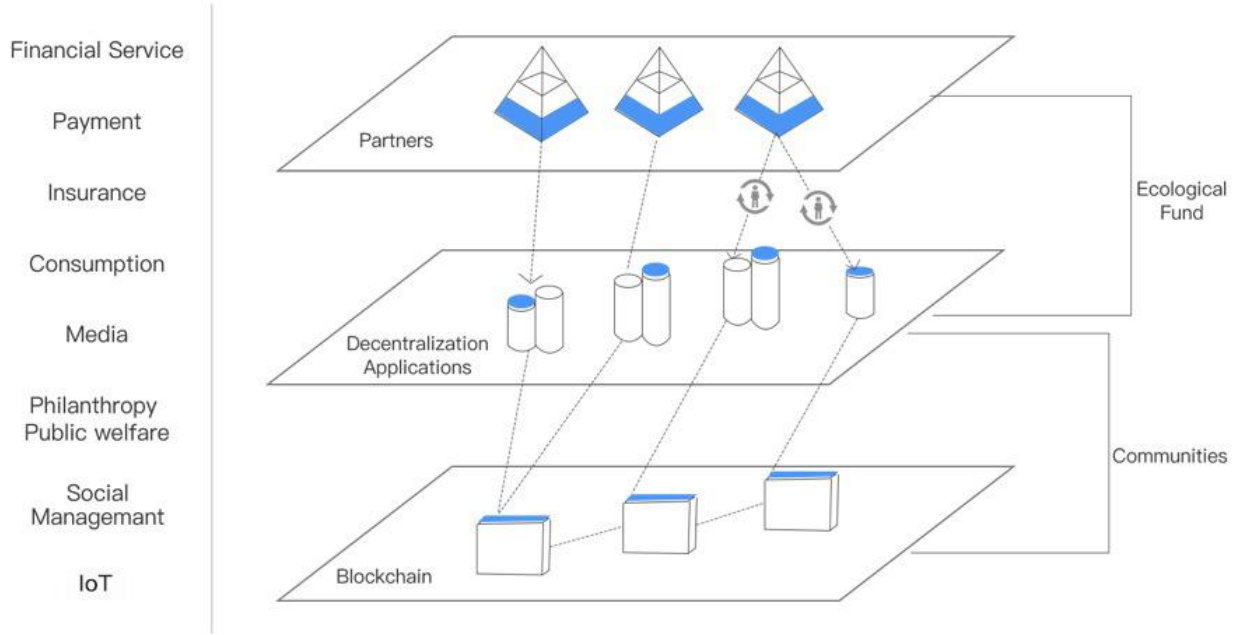
USECHAIN ECOSYSTEM

1. Ecosystem Value

Usechain has a leading team in blockchain technology that will work closely with partners and experts from global technical communities to establish a the first high-performance mirror identity blockchain.

With the deep connections with top business schools, Usechain has rich resources in various industries and will collaborate with reputable companies to create identity-based applications. The goal is to create an identity-based blockchain ecosystem with the most advanced technology, richest application scenarios and largest user community.

2. Ecosystem Architecture



A. Users

Individuals, assets, things and objects can use the verification mechanism and service applications in the Usechain ecosystem to complete mapping of address and identity verification. It also helps to confirm and preserve users 'rights. which can accumulate the value of identity by continually generating transparent and public behavioral data.

B. Application Participants

Individuals and organizations can endorse identity verification for others based on their identity certification. and contribute to the development of Usechain ecosystem. Service providers, however, will be able to develop their own related business applications and to further expand their businesses based on the structure and system of Usechain.

C. Technology Participants

As the most essential participants in Usechain ecosystem, the Usechain developing team is fully responsible for the architecture framework, the development and operation of protocols, the coordination work with partners in technology and continually optimizing the ability to operate in underlying public chain, network layer and application layer and protocol layer within the ecosystem

3. Ecosystem Applications

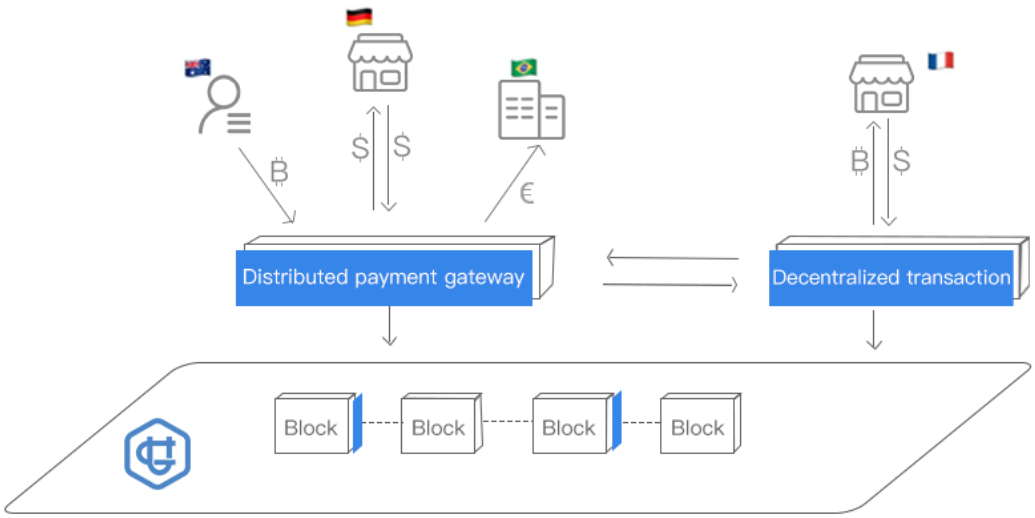
Innovative Application: Identity Tokenization

Individual has zero cost in learning and low entry threshold to tokenize identity. Usechain will develop a channel to seamlessly connect the real and digital world to establish a high-efficient, secure, unbounded and decentralized tool for value transmission and digitalize all things. Within the identity ecosystem, it has created a variety of diverse and flexible value-transition channels, which enables the transmission of value regardless of forms in high efficiency within the system.

This can be applied in many scenarios, such as fan-based or content-based token economy, the sharing of rights and interests with regards to trusted individual as well as the affirmation of sizeable assets.

Usechain foundation will also set public accounts and balance the price by buying in with other stable cryptocurrencies.

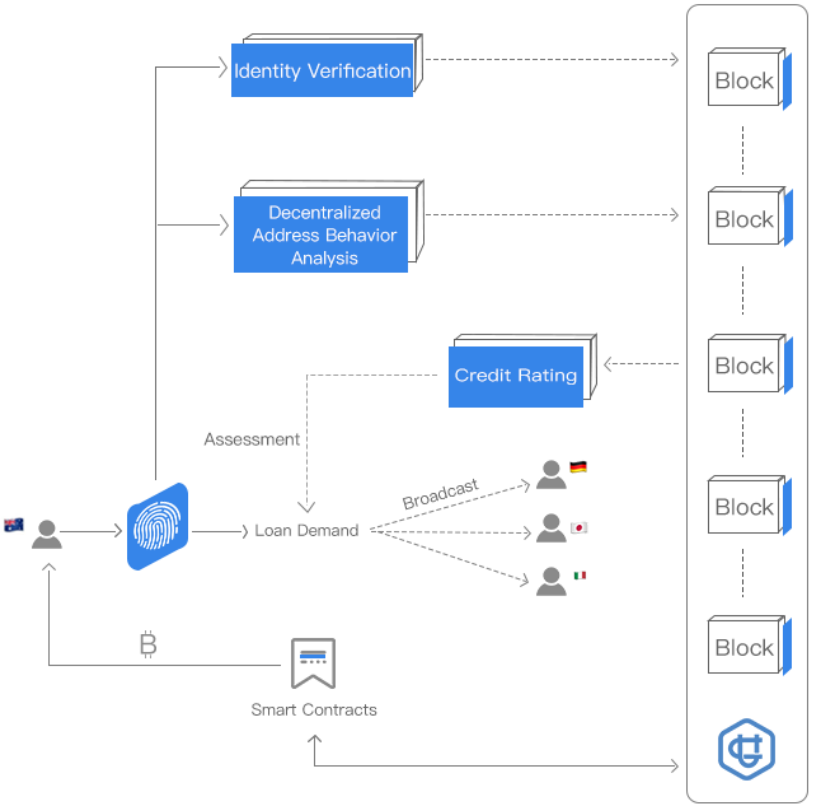
Scenario I: Cryptocurrency Payment



Users can use cryptocurrency stored in wallet for payment. These payments will be processed in a decentralized peer-to-peer network without the involvement of centralized systems, users can use cryptocurrency and digital discount coupons for payment.

In such payment method, merchants can save on the transactions fees when using credit cards. This also helps to achieve point-to-point payment worldwide. USE can be used to purchase digital coupons and merchants can use it as a promotional strategy by adjusting the limit of USE accepted.

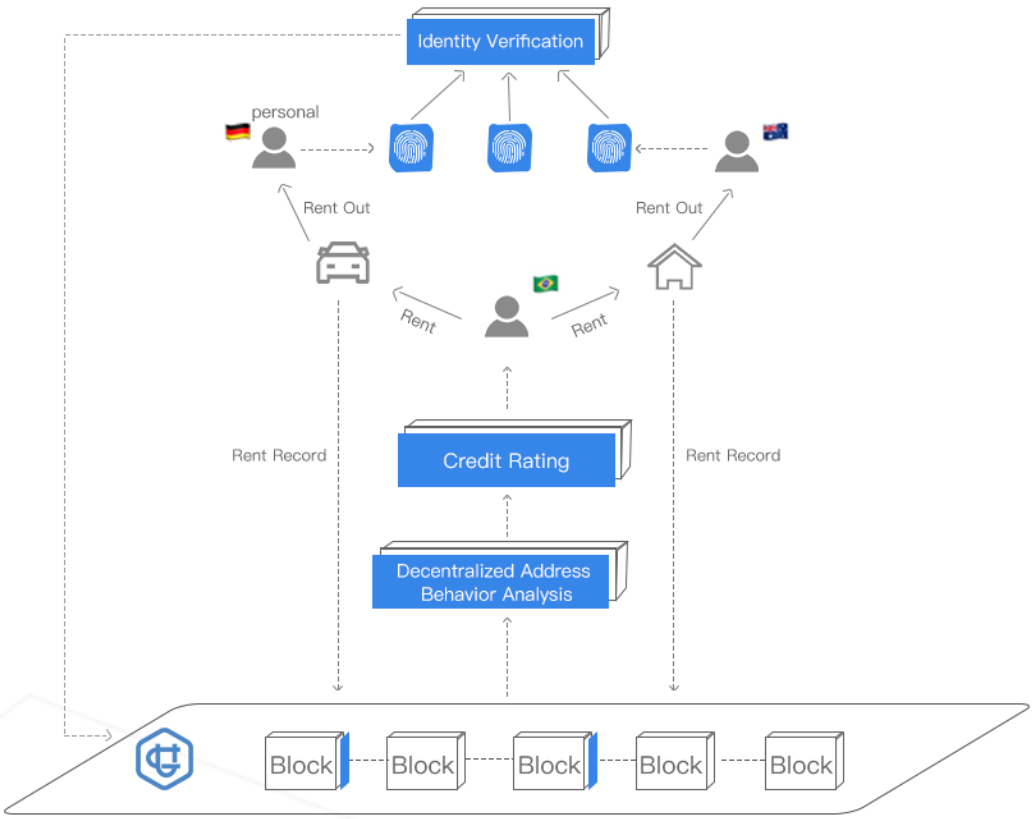
Scenario II: Decentralized Financial Services



Usechain analyzes the behavioral data using identity-mapping addresses to construct an open and transparent identity value and trust system. The distributed ledger technology (DLT) is applied to broadcast the entire process in the blockchain network. Hence, the impact on identity credit status rating will also be permanently recorded on the blockchain. As a result, the cost to breach such credit rating system is too high. The decentralized point-to-point transaction dramatically improve the efficiency in execution, allowing individuals to have, convenient, secure and flexible access to provide and enjoy a range of inclusive financial services, such as loans, crowd funding and others.

Subsequently, everyone can perform mutual authentication. The information recorded on the blockchain cannot be amended or deleted, which makes the decentralized system reliable and trustworthy. In conjunction with the personalized identity token, users can even provides loans to others using tokens with identity mark which enables safe and efficient transfer of value between each other within the decentralized ecosystem.

Scenario III: More Credible Sharing Economy

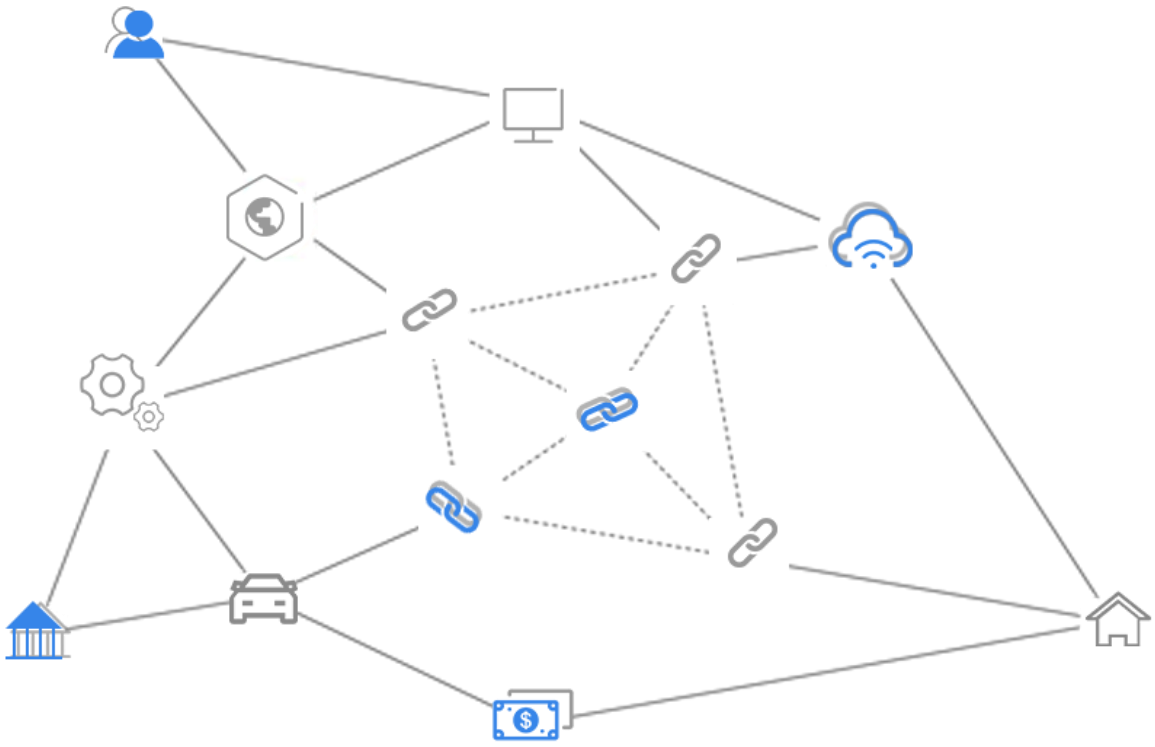


Regardless of sharing a car, a bicycle, an apartment or an investment, the crucial problem in a sharing economy is trust, which, however, can be resolved by applying blockchain technology.

Take Airbnb for example, a stranger living in your home will definitely cause you concerns. However, if his/her previous behavioral data is broadcasted on the blockchain, and will not be deleted or changed. People can easily determine and conclude if the he/she is trustworthy before reaching a deal. Under such circumstances, individuals will pay more attention to their own behaviors.

Apart from the existing advantages of being transparent and local within the shared economy, Usechain can use such economic model to provide sharing economy with higher-level of credibility and mutual trust. In addition, any businesses using the sharing economy model will be linked to a realistic, verified and immutable identity and a ledger of with similar characteristics. Transaction histories are accessible to all parties. Any misbehavior or misconduct will face absolutely transparent investigation.

Scenario IV: More Efficient and Secure IoT Applications

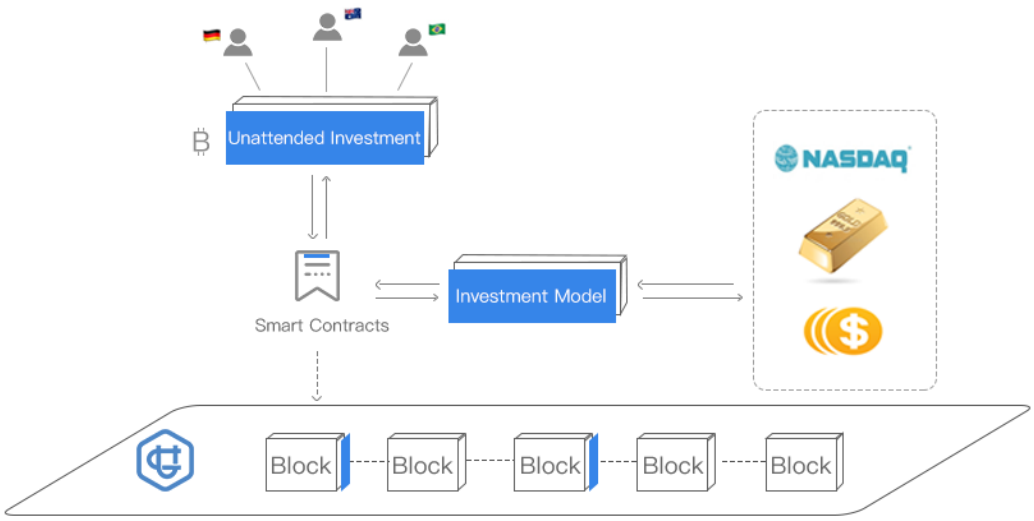


With the rapid development of the Internet of Things (IoT) and smart devices, it is expected that, by 2020, there will be more than 6.58 smart devices attached to each person. Particularly, smart devices will be able to replace us in some of our day-to-day activities through smart IoT. However, IoT devices encounter various problems such as security risks, privacy issues and high cost for operation because of being highly centralized.

Under the ecosystem of identity-based Usechain, it not only provides high-performance, secure and decentralized solutions, but also featured characteristics such as high efficiency, low cost in authentication and reliable identity verification for scenarios

which require identity-based authentications like bicycle sharing, car sharing, NFC payments and others.

Scenario V: Unattended Investment and Equity Management

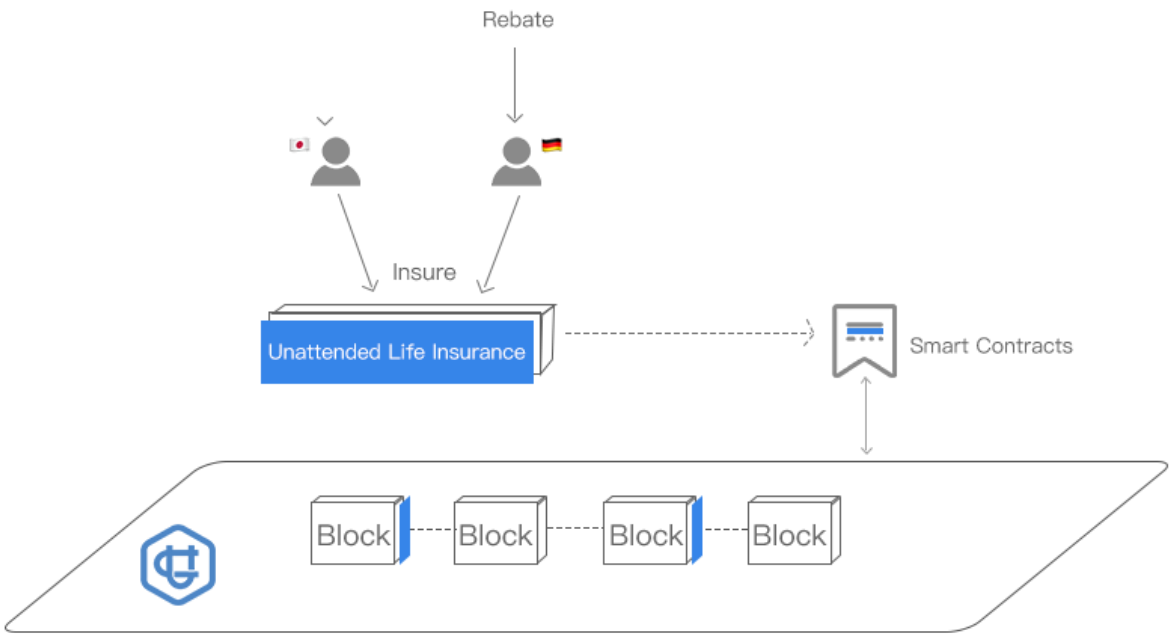


Many studies have shown that in the recent 100 years, no investment returns in the stock markets can outperform that of passive index fund investment. Many of the active funds are not only unable to generate high returns, but also charge 1-3% exorbitant transaction fees, revealing low management transparency, asymmetry information and significant lack of trust.

The Usechain platform allows users to set up a decentralized fund to conduct passive investment in the market portfolio index. Each transaction is transparent and there is no management fee. Withdrawal is based on the net asset value minus a certain fixed transaction fees.

In addition, the rights of beneficiary can be digitalized transferred or given, allowing flexible usage for different purposes.

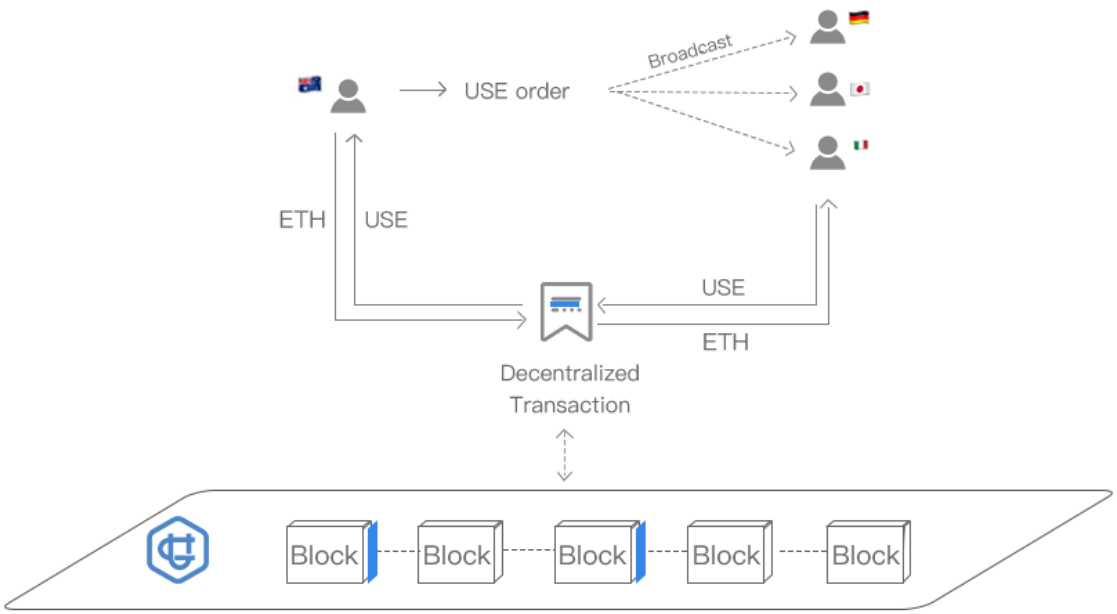
Scenario VI: Decentralized Insurance



Usechain will provide convenience for the self-help in community. Decentralized distributed ledger technology (DLT) allows people to build confidence in mutual-aid accounts. Every user in the community can use USE to participate in an unattended insurance fund. There will be no premium collection and the investment in insurance funds is set in advance according to the algorithm. This can be used in life and medical insurance. Every participant will receive the corresponding guarantee insurance payout and a deduction to be made on the necessary expenses for notarized documents.

Since all information is recorded on the blockchain, chances of scams are greatly minimized, thus reducing premium to near zero.

Scenario VII: Decentralized Exchanges



Currently, there are hundreds of centralized exchanges in cryptocurrency market. These exchanges acting as intermediaries to provide a platform for arbitrage trading have been revealed for market manipulation as well as setting high transaction fees to make profits. They store users' digital asset and data in a centralized storage system, which exposes users not only to threats from hackers but also the potential operational risks that exchanges might encounter.

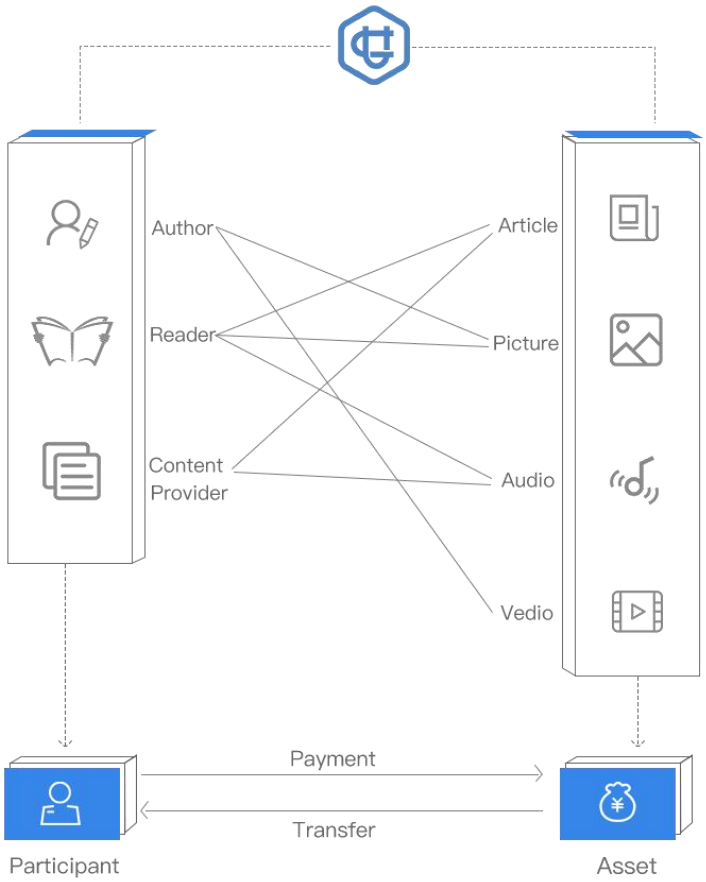
First of all, our public chain is decentralized, with thousands tps and scalable. This will be the bases for us to build a decentralized exchange. We will also use RPOW to have a randomized central

transaction matching service and a decentralized clearance and settlement serviced. That is matching of buy and sell is still by a single dealer but the dealer is chosen randomly among a group of dealers. The basis of our design is still based on RPOW.

Using a high-performance identity-based blockchain, Usechain will be able to build a idecentralized exchange focusing on security, efficiency and better user experience. It ensures that users' asset will not be lost and remain intact in their accounts throughout the whole transaction process, providing service for massive and low-cost transmission of value and adequate liquidity for exchanges.

Decentralized exchanges will become the best trading platforms for personalized identity tokens. Traditional financial assets such as stock, gold, etc. can be converted into tokens. As the Usechain ecosystem continues to grow, the number of participants and resources will also increase to provide sufficient liquidity for decentralized exchanges in the future.

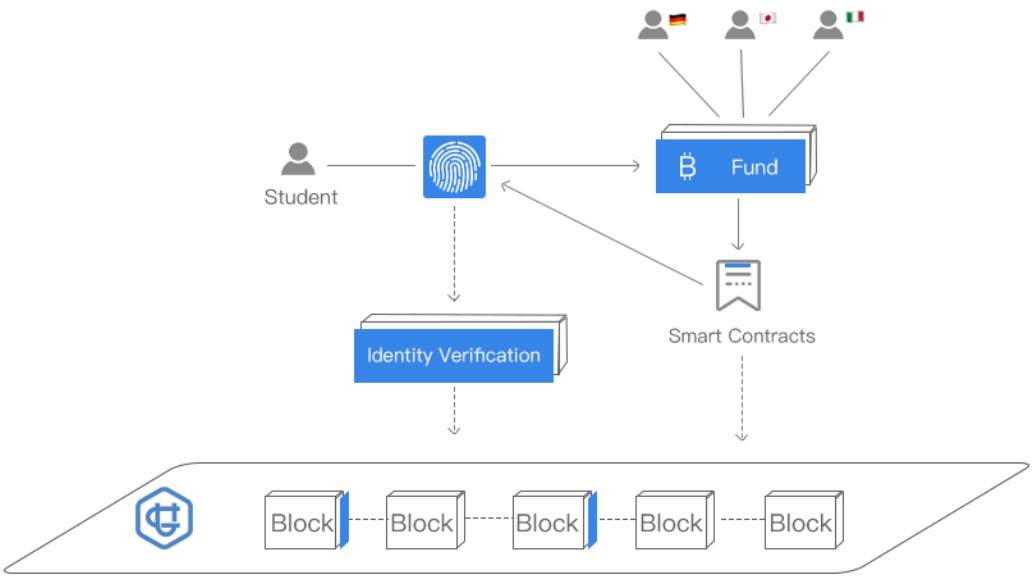
Scenario VIII : Digital Content Production and Trading



Content creators can perform copyright registration of their works based on blockchain technology and broadcast in the network to reach a consensus. When copyright is violated, the reliability to ensure the time when copyright is confirmed can be achieved by adding timestamp with the help of blockchain technology. At the same time, you can also apply for a judgement by voting. With the help of characters brought by identity blockchain, misbehavior will be broadcast within the network, making the cost to violate copyrights and negative effects be enormous.

Any content whose copyright is confirmed can achieve the transmission of value through exchanging USE in a decentralized and high-efficient way. You can even build your Usechain system centering on the value of individuals by issuing personalized identity tokens.

Scenario IX ：Tuition Fund

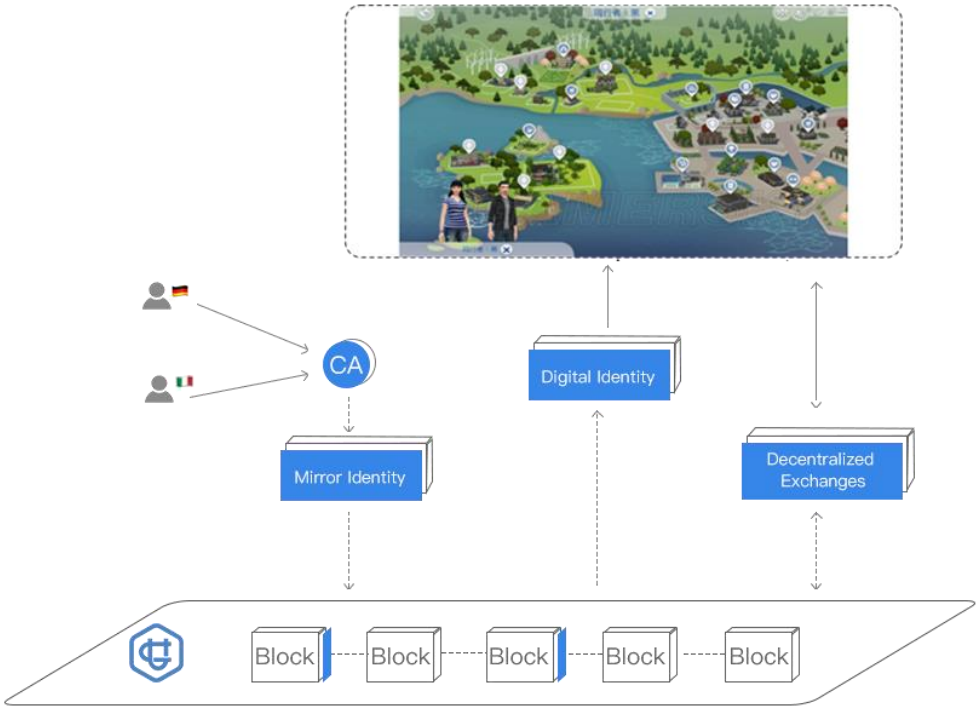


With the gap between the rich and the poor widen, many students are unable to afford the high tuition fees. Usechain community is able to establish a tuition fund to provide interest-free loans and help students with financial pressure to complete their studies.

Every year, alumni can donate cryptocurrency to establish funds. In turn, students who need financial support can apply for the interest-free loans. After graduation, students can use their diploma to apply USE for repaying their student loans. The diploma can also be used to build identity-based tokens to repay the debt gradually. Each year, the tuition fund will issue interest-free loans to needy students. At the same time, loans that were borrowed before will be paid back at specific deadline. If accounts do not have sufficient USE or equivalent amount of identity tokens, it will automatically be extended for one year. The priority to pay back will be based on the date when loads are applied. If there are surplus funds left in the account, it will be used to repay loan in advance. After all loans and tuition fees are paid off, the rest will be used to grant scholarships to students enrolling in the next following year. There will not be any repayment for scholarships.

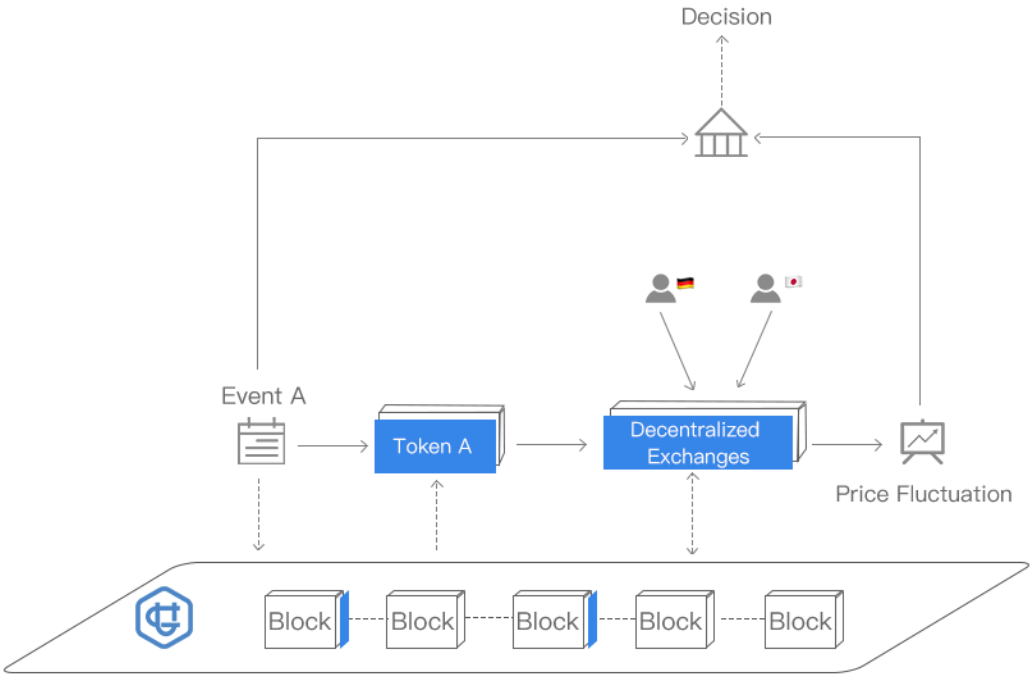
The major risk in student loans may be that students are unable to repay the debt. However, as blockchain technology is reliable and any data broadcast on it is irreversible, the likelihood for students not to pay back loans will be greatly reduced.

Scenario X: Blockchain Games



Through mapping real identity onto blockchain, online communities can be established on blockchain network, to create relationships and form teams. One of the characteristics blockchain technology has is that it can still survive without the existence of its creator. One possible application of such scenario will be the virtual self-existent on blockchain.

Scenario XI: Market Forecast



USE will start by using renowned schools as evidence of trust to provide personalized token verification, later, it will provide verification for all participants and launch the USE-derived Arrow-Debreu Coin to commemorate Kenneth Arrow and Gerard Debreu, the two famous Nobel Prize winners in economics.

In 1954, Arrow-Debreu first proposed that any economy could complete the market by adding a deterministic function of event states. Following the AD model, our system can add AD token to trade any commodity and verifiable events, such as the price of a computer, or the prediction of the US presidential election. Token prices can be used to collect information from all over the world to reduce information asymmetry and help entrepreneurs to make more effective investment strategies. At the same time, investors can actively participate the development of global economy.

PART IV

USECHAIN GOVERNANCE

1. Usechain Foundation

The Usechain Foundation ("Foundation") is a non-profit organization established in Singapore and is committed to developing Usechain, advocating governance transparency, and promoting the security and harmony within the open-source ecosystem.

To avoid events violating to the design concept of blockchain, the Foundation will develop a decent governance structure to provide assistance to general affairs and other privileged matters.

2. Foundation Principles

The Usechain Foundation has three fundamental principles:

- **Impartiality**

Sole management to develop Usechain and its applications;

- **Non-profit governance**

Serves the interests of USE holders and develop a stable and scalable system;

Token issuance and distribution managed by the Usechain Foundation;

- **Strong governance system**

The Usechain Foundation is an independent legal entity with a distinct way for operations and governance framework and is advised by top professionals;

3. Goals

The mission of Usechain Foundation is to develop a real-name credit ecosystem, making it possible for consumers to enjoy all products and service based on credit. At the same time, The Usechain foundation will give developers an open and sustainable platform to, develop, deliver and enhance those existing services to attract users. To accomplish that, the Usechain foundation will devote its resources to three specific areas including research, development and governance.

- **Governance Goals**

The Foundation will devote resources to establishing a fair and transparent governance, process and take feedbacks and requirements from all participants in the ecosystem into consideration. This open governance model will oversee all users' engagement in decisions about process, rules, token issuance, pricing rules, legal affairs as well as content and compliance guidelines. The Usechain Foundation will be responsible for administering and overseeing the security of the USE reserve and the transparency in the use of USE and any token proceeds.

- **Research Goals**

The Usechain foundation aims to foster an innovative environment by working closely with its partners. The collaboration includes testing new methods to participate in the ecosystem, drive the creation of value and effects in network Usechain foundation can also fund research to support an autonomous network that is secure and effective in providing business services.

- **Development Goals**

The Usechain Foundation aim to direct and fund the development of Usechain itself. It will also provide tools for partners in the ecosystem to build, develop and create value in the ecosystem. As part of such process, Foundation will open source code to support new communities and join development team to continue improving and supporting the technology kit and maintaining the base which can be used by participants in the ecosystem.

PART V

TOKEN SALES

1. USE

Usechain will issue an official token – USE to effectively reward community developers and supporters, support the growth of the ecosystem and allow all participants to use the decentralised applications.

After the Usechain main net goes live, the rate of increase of the issuance rate will be determined in accordance with the growth rate of the ecological economy, which will ensure stable inflation of the Usechain Ecological Economy.

Usechain, the first global identity mirroring public chain, is a high-growth ecological platform, which will carry a large number of identity-based applications in the future and USE is the common circulating token in the Usechain ecosystem. To build the Usechain ecosystem, USE will make the following core applications ,included but not limited to, realize:

1. To encourage members of communities and participants to contribute computing capabilities, USE will be regarded as a gas token for the public chain. The Usechain network charges fees for the transaction of tokens and the operation of smart contracts to achieve economic incentives for bookkeepers and prevent resource abuse.
2. Usechain will carry a large number of commercial applications in the future, such as finance and consumption. USE, as the universal circulating token in the ecosystem, will be the common basis payment tokens for all participants (companies, institutions, individuals) to complete transactions, in exchange for assets, goods, services, etc.

USE is an important circulating Token on the platform. Usechain owns high-quality commercial resources in various industries of the world's top business schools so that it will be able to rapidly deploy a large number of industries' Dapps, whose establishment will introduce more commercial application scenarios and users, further promoting a greater range of demand for possession and use of USE tokens. With the continuous increase in the number of platform users and the sustainable development of ecological economy, the value of USE will persistently increase.

2. Token Distribution

The total quantity of USE is 20,000,000,000 USE. The distribution plan is as following:

Distribution Ratio	USE Quantity	Distribution Plan
45%	9,000,000,000	For Sale
5%	1,000,000,000	Marketing & Partner Support
20%	4,000,000,000	Community Rewards
15%	3,000,000,000	Technical Community Rewards
15%	3,000,000,000	Core Team

- **For Sale**

For technical research, hardware and bandwidth cost, project operation, and marketing of the Usechain platform. The private sale USE, 25% unlocked before exchange listing, 25% unlocked every 2 months thereafter, with total unlocked in 6 months.

Soft Cap: 2,700,000,000.

Hard Cap: 9,000,000,000.

- **Community Rewards**

35% of USE will be reserved as the community reward, which is divided into two parts: 15% for technical community rewards, mainly used to motivate developers to contribute their technology to Usechain ecosystem. 20% for community rewards, mainly used to support the operation of business model. All distribution rules and process are transparent, distribution can be completed automatically through smart contracts.

- **Core Team**

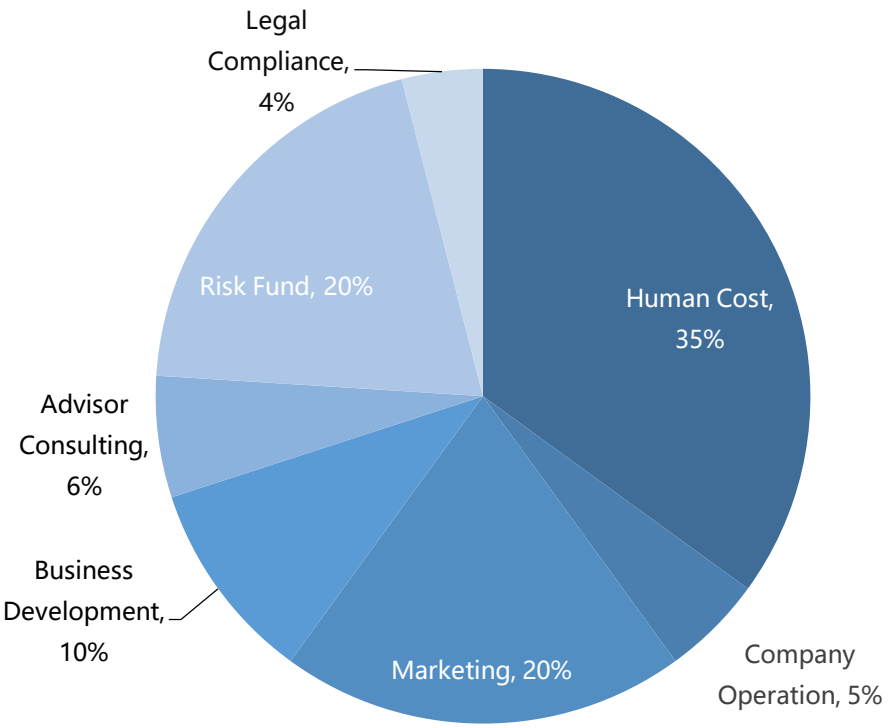
Early team members who provide product and technical support are being rewarded for the development of Usechain during the early stage. The portion of USE for team rewarding will be released 25% every 12 months.

- **Marketing & Partner Support**

5% is for marketing and rewarding partners who provide strong supports in the process of promotion and publicity. Besides, 6% of USE for Marketing & Partner Support is special for community-based bounty program.

3. Use of Funds

The funds raised will be mainly used in the following aspects to support the operation of Usechain:



Fundraising instructions：

Projects	Ratio	Descriptions
Human Cost	35%	We will hire expert in the field of blockchain, finance, website, distributed ledger technology expertise, etc.
Company Operation	5%	Start-up operation cost .
Marketing	20%	Branding, advertising, cross-field cooperation and other expenses for 2 years.
Business Development	10%	Supporting the commercial development of different applications in the Usechain ecosystem.
Advisor Consulting	6%	For overseeing project development, advise, consultation and sharing of expertise.
Risk Fund	20%	To prepare for unforeseen risks.
Legal Compliance	4%	Stay compliance with related cryptocurrency regulation and jurisdiction laws.

4. Commitment and Protection

- Team will publish an operations report each quarter, to ensure transparency.
- We will invite internationally renowned individuals and audit firms to conduct independent audits .

- We will regularly hold offline meetings aiming for core investors and send invitation to visit us.

PART VI

CORE TEAM AND ADVISORS

Henry CAO

Founder, CEO

Finance Professor at Cheung Kong Graduate School of Business, Head of the Department of Finance, Founder of the first Finance MBA program in China, Managing director of China Blockchain Application Research Lab, Member of the Finance Society of America, taught at the University of California at Berkeley, the University of North Carolina, Chapel Hill, admitted to the USTC gifted class at 13 years old, Yale University/ UCLA PhDs.

Baohong SUN

Co-founder, CSO

Marketing Professor at Cheung Kong Graduate School of Business, Dean's Distinguished Chair Professor of Market, Associate Dean, Fomer Chaired Professor at Tepper Business School, Carnegie Mellon University, editorial board member of "Marketing Science", "Journal of Marketing" and "Journal of Marketing Research", The world economic forum on future behavior, Renmin University of China, BS, USC PhD.

Feng ZHANG

Senior Financial Advisor

"Thousand Talents" Expert, near 30 years of experience in QIHF globally, MD of Asset Management Dept of Citigroup/ Morgan Stanley, GM of Stock Investment Dept of Bosera Funds, Investment Director of BoCom-Schroders Fund, Tsinghua BS, UC Irvine, PhD.

Andy ZHOU

CTO

Technical Director of Beijing United Electronics Co, Serial entrepreneur, Senior Engineer in iFLYTEK, HUAWEI, Technical Director In ChuKong Technology, Deep understanding of big data, artificial intelligence and distributed system, Double a bachelor's degree from University of Science and Technology of China (USTC) and MS from Chinese Academy of Sciences (CAS).

Erik XU

COO

Near 10 years of experience in Internet and information security industry in General Management and Marketing, Serial entrepreneur, Served as Vice President for Beijing YunJiang Technology Limited, Head of information security project at National Information Security Engineering Center, Executive Director of the National Key Technology R&D program during the 12th Five-year Plan Period, responsible for a number of national information security and key manage center (KMC) projects, Member of National Information Security Standardization Technical Committee and Big Data Working Group, MBA from Cheung Kong Graduate School of Business.

Lin ZHAO

CPO

Near 10 years of experience in Internet and new retail industry, experienced in platform building for horizontal e-commerce, O2O, Eco-friendly product and service specialist, Chief Product Manager of the leading O2O E-commerce Bee Quick.

Gengnan SONG

Global Community Developer

Nearly 10 years of professional experience in Internet, community operations and business. Over 8 years of community operations expereince at Tencent, covering products from early stage PC community product Discuz! to Tencent micro-communities on mobile Internet and Tencent Interest Tribes. She is the former Business Director at a well-known platform for evaluating catering services in China.

Liang ZHANG

Technical Architect

Many years of experience in digital currency exchanges and blockchain development. He is the former Senior R&D Engineer at Microbit Cryptocurrency Exchange and the Gibraltar National Blockchain Exchange. He started to participate in blockchain projects since 2015, and he has had deep research of the current mainstream blockchain technology.

Lucas LU

Senior Advisor

Senior expert of Blockchain, Founder & CEO of 5Miles, Founder & CEO of Cybermiles (CMT), Served as Co-Founder & CTO for Lightinthebox (LITB), the first GM of Moible Taobao, China University of Science and Technology BS, SMU PhD.

Yin CAO

Senior Advisor

Started to do research and promote blockchain application in 2015, was among the first to propose the concept of Energy Internet in China, Co-founder of the first Energy-Blockchain Lab in the world, Chief Blockchain Expert of Cinda Securities Co.,Ltd, Former member of E-residency of Estonia, Major member of the Technical Working Group China of Hyperledger Project.

Shangjin WEI

Senior Advisor

Professor of Finance and Economics, Professor of International Affairs, and N.T. Wang Professor of Chinese Business and Economy, Columbia University, Research Fellow, Center for Economic Policy Research (CEPR), Member, Council on Foreign Relations Non-resident Senior Fellow, The Brookings Institution Director, NBER Working Group on the Chinese Economy.

Allen YAN

Senior Advisor

Senior Internet Business Specialist, Chairman of the Board & CEO of AdChina, Founder of Lakeshore, Served for E-bay, Philips, and Alcatel-Lucent, MIT EMBA.

Qian MA

Senior Advisor

Founder & President of DataMesh, Chairman of Central Big Data Development Committee, Founder/Director of Shanghai Pingfu Asset Management, Former Vice President of Fortune Link Venture Capital Co., Ltd, Over 10 years of experience in investment and business management.

Stewie ZHU

Senior Advisor

Founder & CEO, Distributed Credit Chain , Serial entrepreneur in the internet and Fintech industry. Ph.D. candidate in Finance at The London School of Economics and Political Science with research focus on finance and cryptoeconomics. MS in Financial Economics from Oxford University, MS in Statistics from Yale University, and MA in Statistic as well as bachelor's degree in Electrical Engineering from Nanjing University.

Jianfeng YU

Senior Advisor

China National “Thousand Talents” Expert, PhD of the Wharton School at University of Pennsylvania. Master of Yale University. Current chair professor of finance in Tsinghua PBCSF. Director of financial asset management research center in National Finance Research Institute in Tsinghua University. Former chair professor of Carlson School of Management at University of Minnesota. Executive assistant dean of Economics and Management at The Chinese University of Hong Kong,Shen zhen. Researcher at the Federal Reserve Bank Dallas since 2011. Mainly engaged in the theoretical and empirical research on behavioral finance and macro-finance. Research results achieved many awards, including the First Prize of Smith-Breeden.

Jeff CAO

Senior Advisor

PChain Founder. The inventor of the 1st International Blockchain patent from China, the Co-Founder of ChinaLedger, the most influential blockchain alliance of China.The Chief Scientist of Blockchain Application Committee in China Federation of Logistic and Purchasing (The 1st Gov Association in Industry), the Senior Fellow of the China Blockchain Research Alliance.Successfully accomplished the 1st blockchain based assets earning rights transfer in the world in September 2016, which is also the 1st Financial Blockchain Transaction in China.Ex-Chief Scientist of Internet Finance and cochair of the patent review board in IBM Research China , IBM Global Technical Achievement Awards three times.22 papers in ACM/IEEE top conference and 30+ international patents.

PART VII

INVESTORS & PARTNERS

雄岸基金
Grand Shores

科银资本
CollinStar Capital

FUNCITY 泛城资产 capital

JRCrypto

DFG
DYNAMIC FINTECH GROUP

DCC

累石
MILESTONE

NEWDO
venture

极客学院
jikexueyuan.com

盈信泰资本
AUSVIC CAPITAL LTD.

骏募资本
STEED RAISE CAPITAL

capital ultraFUND

North America Blockchain Association
NABA

G

PART VIII

ROADMAP

2016：

- Analyze and determine that blockchain needs to be based on identity
- Senior finance professors at renowned business schools collaborate with blockchain experts to research on identity-based blockchain algorithm, put forward the concept of personalized identity tokenization and study on the pros and cons of identity-based blockchain and tokens.

Q1&Q2 2017:

- Determine the design principles and objectives of the Usechain
- Confirm the development plan of the Usechain
- Officially launch the Usechain Project

Q3 2017:

- Complete the design of Usechain architecture and base protocol for Usechain.
- Complete the overall planning for identity-based blockchain ecosystem

Q4 2017:

- Design and develop low-level public blockchain
- Contact with potential partners from various industries and jointly explore the cooperation mode and planning to be commercialized.

Q1 2018:

- Develop fundamental functions of low-level public blockchain and identity mapping system
- Design and and realize the service of CA

Q2 2018:

- Develop privacy protection system
- Complete the construction of core community and develop the first batch of seed users, number of community members achieves 50000+.

Q3 2018:

- USE gets listed cryptocurrency exchanges
- Develop software-based Randomized Proof of Work consensus algorithm
- Develop enhanced smart contracts
- Develop TPOS consensus algorithm
- Usechain testnet release.
- Number of members in core community achieves 100,000
- Lauch the first DApp in Usechain ecosystem

Q4 2018:

- Complete the setup of sub-chain structure and development of cross sub-chain communication system
- Usechain mainnet release.
- Complete the design and setup of the architecture of identity tokenization DApp and issue the first batch of personalized identity token
- Cooperate with global top venture capital to construct an eco-fund, boost the incubation of DApp and accelerate the development of ecosystem.
- Develop multi-industry vertical community including insurance, credit, culture and entertainment and establish ecological community with joint efforts

2019：

- Realize the smart analysis of identity mapping based on neural network and deep learning algorithm.
- Develop Multi-node System for tokenization
- Develop hardware-based Randomized Proof of Work consensus algorithm
- Increase the number of identity-based DApps adopted into the ecosystem
- Launch decentralized exchange based on Usechain and start trading

RISK NOTICES

The purchase of any tokens involves a high degree of risk, including but not limited to the risks described below. Before purchasing USE tokens, it is recommended that each participant carefully weighs all the information and risks detailed in this Whitepaper, and, specifically, the following risk factors.

A.Dependence on Computer Infrastructure.

Usechain dependence on functioning software applications, computer hardware and the Internet implies that Usechain can offer no assurances that a system failure would not adversely affect the use of your USE tokens. Despite Usechain implementation of all reasonable network security measures, its processing center servers are vulnerable to computer viruses, physical or electronic break-ins or other disruptions of a similar nature. Computer viruses, break-ins or other disruptions caused by third parties may result in interruption, delay or suspension of services, which would limit the use of the USE tokens.

B. Smart Contract Limitations.

Smart contract technology is still at its early stages of development, and its the application of its technology is of experimental nature. This may carry significant operational, technological, regulatory, reputational and financial risks. Consequently, although the audit conducted by independent third party increases the level of security, reliability, and accuracy, this audit cannot serve as any form of warranty, including any expressed or implied warranty that the USE Smart Contract is fit for purpose or that it contains no flaws, vulnerabilities or issues which could cause technical problems or the complete loss of USE tokens.

C. Regulatory Risks.

The Blockchain technology, including but not limited to the issues of tokens, may be a new concept in some jurisdictions, which may then apply existing regulations or introduce new regulations regarding Blockchain technology-based applications, and such regulations may conflict with the current setup of USE Smart Contract and the concept of USE token. This may result in substantial modifications of the USE Smart Contract, including but not limited to its termination and the loss of USE tokens as well as a suspension or termination of all USE token functions.

D. Taxes.

Token holders may be required to pay taxes associated with the transactions involving USE tokens. It will be a the sole responsibility of the token holders to comply with the tax laws of the relevant jurisdictions and pay all required taxes.

E. Force Majeure.

The performance of Usechain may be interrupted, suspended or delayed due to force majeure circumstances. For the purposes of this whitepaper, force majeure shall mean extraordinary events and circumstances which could not be prevented by Usechain and shall include: natural disasters, wars, armed conflicts, mass civil disorders, industrial actions, epidemics, lockouts, slowdowns, prolonged shortage or other failures of energy supplies or communication service, acts of municipal, state or federal governmental agencies, other circumstances beyond Usechain's control, which were not in existence at the time of Token sale. If such circumstances occur prior to issuance of USE tokens, Usechain will be unable to issue USE tokens within 3 months from the projected date, the escrow agent may issue a refund at the request of the USE tokens purchasers. The refund will be issued in the original form of payment to the same digital wallet or bank account where the funds were transferred from.

F. Disclosure of Information.

Personal information received from USE tokens holders, including the number of tokens owned, the wallet addresses use and any other relevant information, may be disclosed to law enforcement, government officials, and other third parties when Usechain is required to disclose such information by law, subpoena, or court order. Usechain shall at no time be held responsible for such information disclosure.

G. Value of USE Token.

Once purchased, the value of USE tokens may significantly fluctuate and may even become valueless due to various reasons. Usechain does not represent, warrant or guarantee any specific value of the USE Token over any specific period of time. Usechain shall not be held responsible for any fluctuations or loss in the value of USE tokens.

Assumptions with respect to the foregoing involve, among other things, judgments about the future economic, competitive and market conditions and business decisions, most of which are beyond the control of the Usechain team and therefore difficult or impossible to be accurately predicted. Although the Usechain team believes that its assumptions underlying its forward-looking statements are reasonable, any of these may prove to be inaccurate. As a result, the Usechain team can offer no assurances that the forward-looking statements contained in this whitepaper will prove to be accurate. In light of the significant uncertainties inherent in the forward-looking statements contained herein, the inclusion of such information may not be interpreted as a representation, warranty on the part of Usechain or any other entity that the objectives and plans of the Usechain project will be successfully achieved.

Please note that the Usechain project USE Token may be subject to other risks not foreseen by its team at this time.

END