



DBS-WHITE PAPER

Make everyone's data valuable



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Prefac

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1.1. Current situation of encrypted digital token market

According to statistics from Hootsuite, with the development of the mobile Internet, the popularity of smartphones, and the gradual maturity of 5G, AI, IOT and other technologies, the total number of people using mobile devices worldwide will exceed 5 billion in 2020, which means that more than Two thirds of people are using mobile devices.

The era of big data has come, and we who are alive today have long been accustomed to the convenience brought to us by the Internet. We can buy everything in the world by sliding our fingers on the screen. We have different account passwords and personal information on different platforms. , While we enjoy the convenience, have you ever thought about where the data will go? But the so-called advantages have disadvantages. While the Internet brings us convenient life, the price we need to pay is personal data.

Up to now, even installing an ordinary mobile APP software requires access to address books, files, and photo albums. The value of data contributed by each of us far exceeds the value of services provided

by major application vendors. For a long time, people have hoped to find a reasonable way to control their data and freely control the rights and interests of personal data, to confirm data rights, end unequal value exchange, and let our data reflect the true value .

For the above problems, blockchain technology students can solve them perfectly and harmoniously. In the blockchain industry ecology, an efficient blockchain data platform that can meet commercial needs is indispensable and occupies an extremely important position. For investors, the combination of blockchain and big data will also be an important track for blockchain applications. CBV is a database application platform solution based on blockchain technology, that is, it has the distributed, decentralized, and auditable characteristics of blockchain, and it also has the characteristics of fast query and beautiful data structure of traditional databases. It is a future data economy. The development of the company provides a brand-new block chain solution and leads a new revolution in data services.



01

Birth background

- 1.1 Blockchain technology
- 2. Opportunities faced by the big data industry
- 3. Pain points of the market

Birth background

1.1 Development Trend of Blockchain

With the continuous integration and development of blockchain and digital economy, new infrastructure, industry 4.0, etc., this technology that reshapes production relations and establishes a trust mechanism has gradually become clear, and some applications have even entered reality.

Blockchain is a kind of trust machine that is established without trust or lack of trust relationship. Therefore, blockchain is of great significance to developing countries, especially countries with relatively low trust. One is in terms of social development.

Blockchain technology can help developing countries speed up their entry into a trusting society, enhance social governance and improve the trust environment. The other is that for industry development, blockchain technology has a greater degree of trust. Industries that are low, or where there is a trust relationship but the trust relationship is not continuous, and the trust cost is relatively high, have disruptive effects.

Specific to my country's current period of historical opportunity and

economic restructuring, by playing the role of blockchain technology integration, empowerment and linking, it is possible to avoid or no longer need to follow the path of building a trusting society in Europe and the United States for nearly 100 years. Therefore, It has a very important and long-term significance.

For thousands of years, the construction of production relations and the evolution of the economy have been achieved through centralization, and business is also achieved through centralized organizations. In the future, blockchain technology can enable human society to provide endorsement mechanisms from countless centralized organizations. , To realize the transformation of the credit society through peer-to-peer transactions in a zero-trust environment. This will infinitely expand the trust space of mankind. Suppose that many investors only get the rhetoric of project practitioners, but many practitioners know that network information can have navy forces, and headquarters visits can be done on site! The information you get is always positive!

However,

the integrity mechanism of the CBVequity model can solve this well.

All commenters are investors. The credibility of the project is not how high the headquarters is, but whether the project dividends

in the past period are in place, which is more critical. The thing is, if the headquarters really makes money, your smart sub-contract model will directly transfer your income to your private account, no one can modify or postpone! This is the charm of CBV!

At the same time, in the future market, credibility will occupy an important proportion, and consumers will jump out of the low position of "xiaobai" in the market. There will be enough project product information evaluation and sufficient credibility measurement methods! And more and more "duty" projects are more willing to have a standard measure of integrity as a bonus to their products. If you can label your products with a "reputation" label, therefore, the reputation market is the future. It is an inevitable trend. Institutions, platforms, and associations have all made such attempts, but now they have finally found the most "fair" model for credibility measurement-the CBVequity model.

1.2 The opportunities we face

First of all, blockchain technology is an underlying technology, but not an overt technology. Unlike face recognition software, it is a technology that can immediately feel its existence after installation. Because blockchain technology is a technology that needs to be integrated and connected with various information technologies, and is

essentially a technology that needs to be embedded in a variety of technical systems.

At the same time, the development of the digital economy requires a large amount of data. If a large amount of data is true, relevant, and useful, it would be perfect. The reality is that a large amount of data may be of low quality, false, and low value density. .

Blockchain can play a role in filtering and screening data, and then secure access and credible sharing of high-quality and credible data, thereby purifying the value of big data analysis or empowering learning. Therefore, we believe that the blockchain fundamentally changes the data access technology, but does not change the data analysis technology. What we call cloud computing is more for the internal of the enterprise. What is the concept of blockchain? The meaning of blockchain is like ERP for enterprises, which is internal process management. If the business ecology of the future enterprise is built based on blockchain services, this is not a simple iterative relationship, but a system transformation. Therefore, blockchain is not only a network technology, but it may also be built on top of a cloud computing platform.

Technologies such as the Internet of Things and edge computing will be developed based on the blockchain platform in the future, which

is also a development trend. Therefore, blockchain technology is a convergent technology, which can promote the better development of various technologies at the same time, and each technology can achieve mutual benefit and inclusive progress.

3. Pain points of the market

1.Data right confirmation and rights protection issues

With the popularity of smart phones, personal data is also being used in more business scenarios. The huge value of data has become the consensus of the whole society and an important re-source for business competition. Although it is a general trend that the ownership of personal data belongs to the individual who generates the data on a global scale, due to the lack of convenient means and effective incentive schemes for managing their own data, in the current traditional Internet ecosystem, it is The popular-ization of "data managed by individuals" is still difficult. In addition, from the perspective of the economic utility of the whole society, strict control of the use and development of personal data by commercial companies has also caused a waste of data resources and hindered the effective allocation of data, an important resource, in the whole society. The data economy ecology urgently needs a dual solution that can protect user data ownership (meaning that you can use your own data, share your own data, and get value from your own data sharing) and allow data resources to be effectively used.

2. Data security issues

On a global scale, data breaches have occurred from time to time, from the theft of Facebook user data to the stolen 500 million pieces of China Lodging Hotel Group's data for sale on the dark web. The centralized data storage and use plan of Internet commercial institutions has always The moral hazard of data abuse and the security risk of being attacked cannot be escaped. This not only brings great danger to personal privacy, but also makes us become "network transparent people" with a little carelessness. It also causes high security costs for enterprises. The repeated outbreaks of data security incidents have also changed the public's eagerness for big data to talk about it.

3. Data authenticity and quality issues

In the process of data transactions, it is difficult to verify the accuracy, freshness, and authenticity of data. At the same time, the dimensions of data that a single data provider can master are limited, and a complete data profile cannot be formed. When any data is used alone, it lacks cross-correlation of multi-dimensional data, and its commercial value is very limited. Only when multi-dimensional data is crossed can the maximum value of data be brought into play.

However, no organization can obtain full data and full samples, even today's Internet giants can hardly do so.

In addition, whether it is an enterprise or an individual, verification of

data authenticity requires extremely high costs, and there are very few accessible channels. The cost brought by the difficulty of authenticating data as an important means of production greatly hinders the efficiency of collaboration in the data economy.

1.3.3 Data authenticity and quality issues

In the process of data transactions, it is difficult to verify the accuracy, freshness, and authenticity of data. At the same time, the dimensions of data that a single data provider can master are limited, and a complete data profile cannot be formed. When any data is used alone, it lacks cross-correlation of multi-dimensional data, and its commercial value is very limited. Only when multi-dimensional data is crossed can the maximum value of data be brought into play.

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1.3.4 The value plundering problem of data

Generally speaking, end users are the source of most of the current data production, and they deserve the highest rights to the data they create. However, the reality is that the user's personal privacy data is stolen, sold, and illegally used in the gray industry chain, and users cannot track their own data usage, nor can they protect their own data. The user's data does not belong to the user, and the user cannot get the corresponding return from his own data in the data circulation link. The commercial value generated by their data is usually exclusive to the application developer, but not allocated. The data producers are our end users. If there is a better data benefit distribution plan that can obtain multi-party consensus, not only individuals can get incentives from the production and sharing of data, but companies will also legally get more. Dimensional data to make the overall scale of the big data economy.



02

C B V Project Introduction

2.1, C B V public chain

2.2. C B V 's mission and vision

2.3 Features of C B V public chain

2.4. One-stop empowering multiple industries

CBVproject introduction

2.1, C B V public chain

The public chain is also called the public chain. In fact, it is the foundation of the blockchain world. Without the public chain, there would be no large-scale application of the blockchain world. Simply put, the public chain is the foundation, and the blockchain is a building above the foundation. "Chain", as the name suggests, means "public ownership". Public chain refers to being open to everyone in the world, everyone can participate in accounting, anyone in the world can read, anyone can send transactions and transactions can be obtained Effective confirmation, anyone can pass.

CBV is a public chain and will be the world's first equity model ecological public chain.

CVB is a database application platform solution

based on blockchain technology, that is, it has the distributed, decentralized, and auditable features of blockchain, and it also has the characteristics of fast query and beautiful data structure of traditional databases. It has the characteristics of supporting the release of multiple digital assets, supporting the development of DAPP, and facilitating operation and maintenance. It aims to create

an ecological model of a main chain consensus on the side chain

thousands of enterprises, fully empowering enterprises, and creating a one-stop ecological model of asset circulation in new business forms. The de-neutralized service-type public chain solves the pain points of enterprise blockchain operation and circulation. At the same time, it solves the core problems that are ubiquitous in the data economy, and reconstructs the way traditional Internet organizations collect, store, calculate, and exchange data. More specifically, the CBV public chain has emerged to solve the difficulties faced by the data economy and create a transparent, decentralized, efficient, and consensus-based data service and network.

CBV is a future-oriented big data economic infrastructure. It can transform all companies around the world into digital tokenization.

Companies and merchants from all walks of life can issue blockchain side chain tokens on CBV to conduct asset circulation operations.

CBV Create a one-stop de-neutralized service-type public chain for users, provide a stable, reasonable, and healthy sales and display environment. All side chain tokens will have a unified consensus, that is, the equity model ecology, so the side chain token Players obtain a contract model for equity mining by purchasing products from side-chain companies and merchants, and then start mining by themselves.

At the same time, the goal of CBVis to reconstruct the production relationship and trust relationship of the industry. Through the rights and interests mining of the side chain, enterprises can operate at a lower cost and obtain financing more easily, and users can also use the opportunity of the enterprise to do a Trust endorsement to ensure the safety and value-added of their own funds, allowing enterprises and users to stand on the same line from opposite sides, build a consensus on value, and jointly build a new big data win-win ecological community.

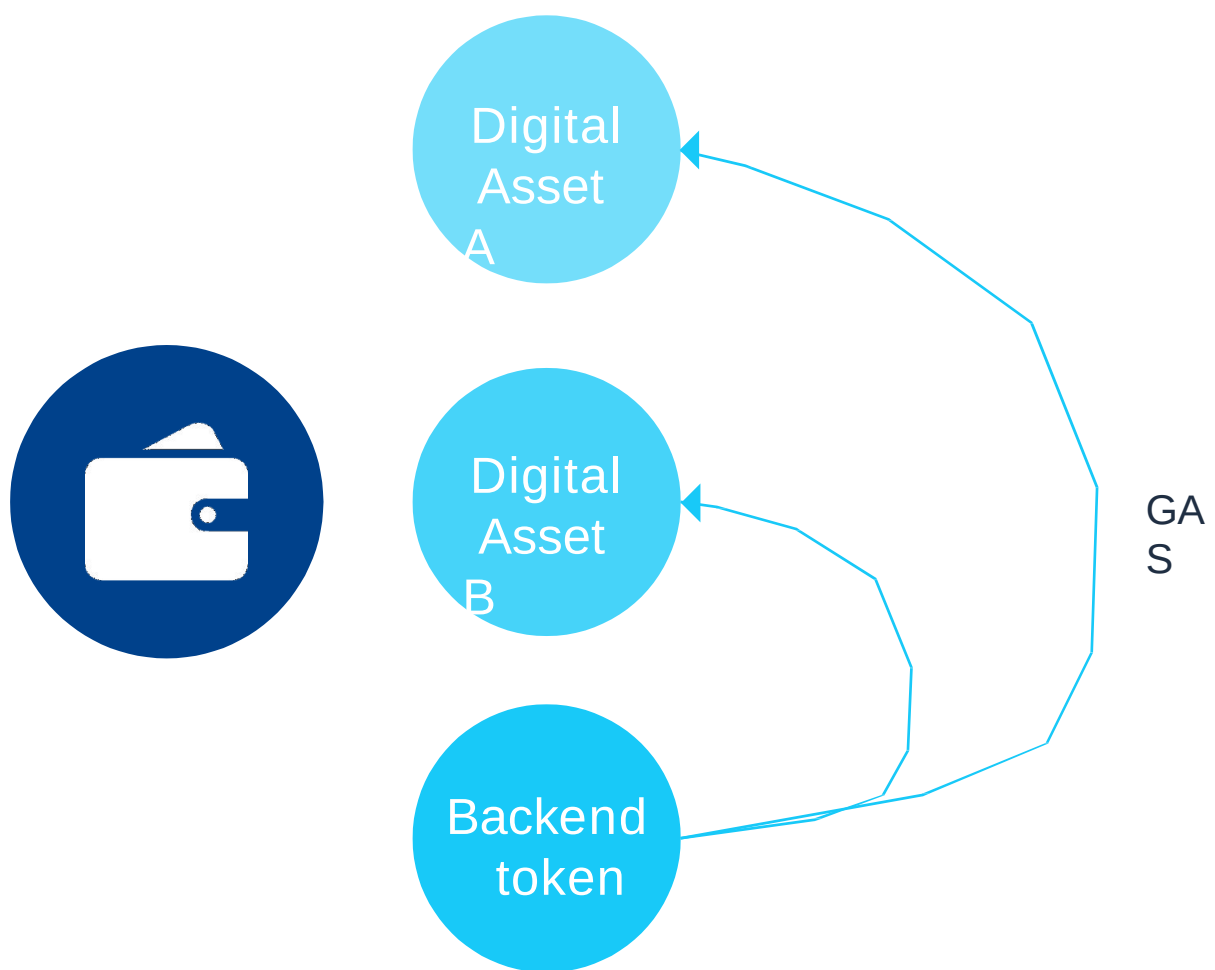
2.2. C B V 's mission and vision

Mission: Re-distribute value through data confirmation, return data ownership to individuals, and let every data generate value. Provide the underlying services of sharing, co-governance, transparency and security for the trillion-level big data economic market in the future.

Vision: Build an ecological model of a main chain consensus on the side chain of tens of thousands of enterprises, fully empower enterprises, new business asset circulation ecological model, build a one-stop de-neutralized service-type public chain, and solve the cumbersome operation and circulation of enterprise blockchain Pain points.

2.3 Support multiple asset releases

C B V supports the issuance of a variety of digital assets, and can set one or more backend tokens as resources consumed when each account transfers, avoiding malicious serial connection of accounts to brush transaction volume, similar to the mechanism of Ethereum GAS. The transfer fees for self-published digital assets can be customized.



2.4 One-stop empowering multiple industries

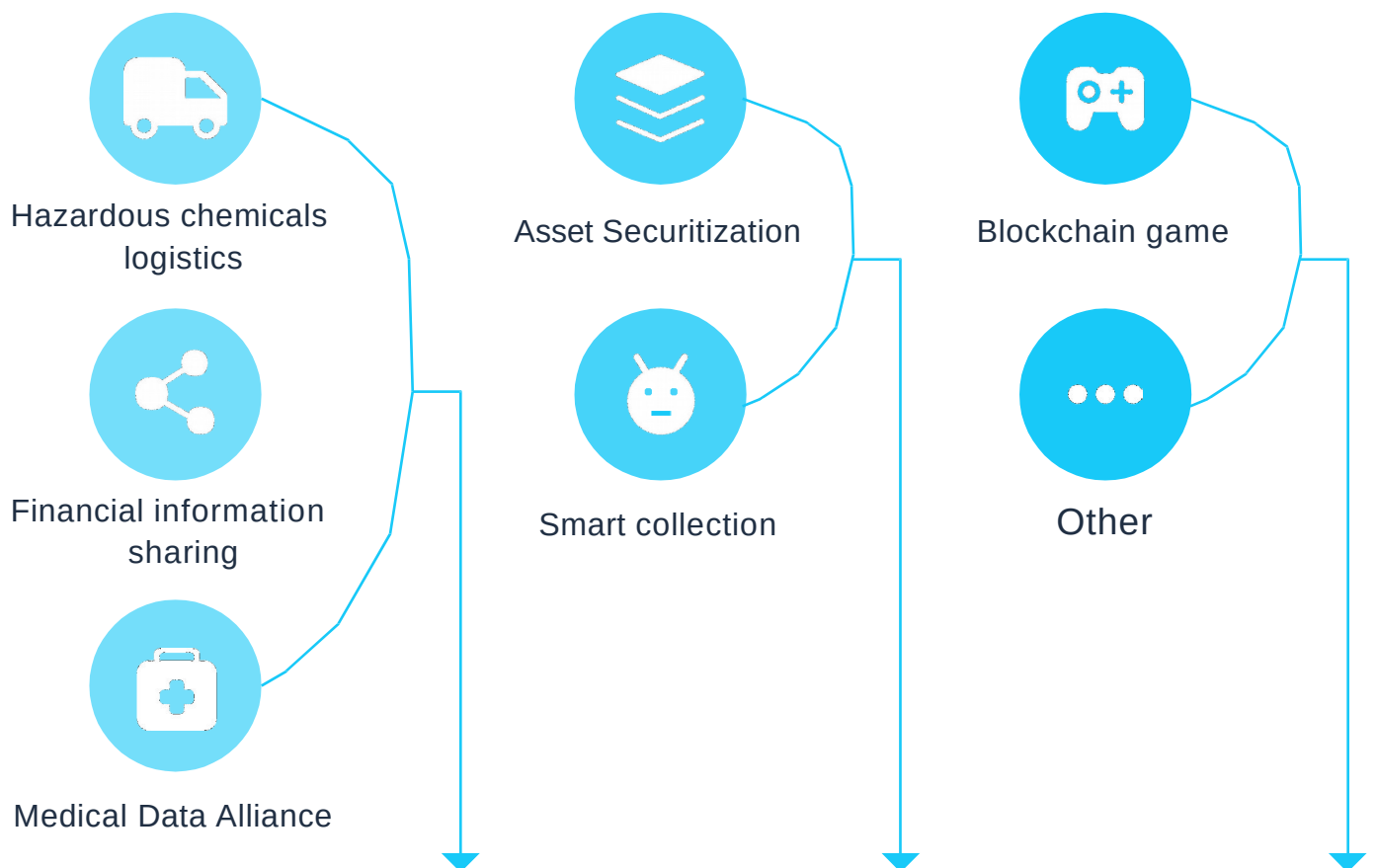
As a decentralized technical mechanism, blockchain has a wide range of application scenarios and market potential. Since the explosive growth in 2017, although the blockchain has entered a stable period, there are still pain points such as conceptual confusion, technical performance constraints, smart contract constraints, consensus mechanisms, and network construction. In order to break industry barriers, put blockchain into actual business scenarios faster, and build a decentralized

Based on the core technology of the underlying blockchain technology, the **C B V** public chain breaks through the three major technical bottlenecks of consensus mechanism, stand-alone computing and serial processing, and integrates ABC and IoT capabilities to create a covering technical framework, product system, and ecological construction. Blockchain commercialization solutions that are practiced in the industry.

On the basis of breaking through the technical bottleneck, **C B V** public chain is positioned as a one-stop blockchain empowerment center, providing enterprise users with out-of-the-box blockchain technology and product capabilities. At present, **C B V** has built a service system that integrates the underlying technology and framework, intermediate layer, product layer and upper-layer solutions.

The system is based on AI+blockchain,
IoT+ blockchain and other

technological innovations, and integrates public chain, super chain,
Ethereum and Fabric as the core technology framework. Blockchain
middle layer and blockchain public platform, privatization deploy-
ment and super Diversified product forms such as node hosting,
and at the same time output one-stop blockchain solutions for
vertical industries such as finance, Internet of Things, medical
treatment, and gaming.



**Blockchain credible depository / Blockchain credible information sharing /
Blockchain credible finance / Blockchain compliance incentives**

Practice in-depth business scenarios

2.5 Multi-party cooperation and win-win model

The new generation of information technology represented by blockchain, based on cryptographic principles without the need for a third-party trust intermediary to participate, enables human beings to realize value transfer on the Internet for the first time.

Utilize circulated encrypted digital equity certificates, and replace traditional contracts with encryption algorithm codes. The code based on the encryption algorithm proves the identity through the digital signature, uses the hash pointer to ensure the authenticity and integrity of the content, and guarantees the automatic execution of the program in the form of a smart contract, which greatly reduces the transaction cost of the collaborative division of labor contract.

At the same time realize the generalization of assets. In traditional business activities, double-entry bookkeeping uses currency and cash, inventory, accounts receivable, advance receipts and other accounting subjects to define assets. However, in the Internet economy and digital age, more and more intangible assets exist in the form of data, The Token of CBVmode realizes the monetization of data assets, enabling data to be confirmed, priced and traded. And

realize the unity of owners, producers, and users. In the ecological community under the **CBV** model, there is no clear distinction between shareholders, entrepreneurs, managers, and consumers.

All collaborative participants in the network have multiple roles at the same time. This is because contributors and factors of production The data is no longer separated, and the relationship between owners, producers and users is organically unified.

Refine the granularity of the division of rights and responsibilities.

The famous economist Coase has a thesis: the clearer the definition of power and responsibility, the easier it is for the economy to reach Pareto Optimality. The conditions for achieving Pareto optimality include clear rewards and punishments for cooperative and non-co-operative behaviors, symmetry of information, and repeated games. This is difficult to achieve in traditional scenarios, but the CBV model adopts open, transparent, and hard-to-tamper distributed ledgers and pairs. The fair Token transaction mechanism satisfies these pre-requisites, giving a new solution to the typical information asymmetric market.

2.6 Advantages of **CBV**

1. Pluggable support national secret algorithm, support national secret and international algorithm in plug-in form;

2. Convenient to use, can automatically convert SQL statements into blockchain transactions, reducing usage costs;

3. One-click automatic deployment of networking, dynamic addition and deletion of nodes;

4. Highly compatible, supporting MySQL, SQLite, DB2, Oracle, SQL Server, etc.;

5. Smart contracts, supporting smart contracts in Solidity language, can realize more complex business scenarios, programmable and dynamically upgraded;

6. Visualized operation and maintenance monitoring platform, which can realize node monitoring, block monitoring, hardware monitoring, node configuration, contract management, transaction data viewing, business data visualization, log analysis, monitoring system alarms, etc. through the monitoring platform;

7. High-performance consensus method: 4000+TPS.



03

Technology Architecture

1. Technical comparison
2. Technical characteristics of **C B V**
3. Support DAPPdevelopment
4. Design safety
5. Side chain technology
6. Introduction to theconsensus algorithm

Technology Architecture

3.1 Technical comparison

	ETH	BTS 2.0	EOS	C B V Public chain
Chain type	Public chain	Public chain / alliance chain (Exchange Solution)	Public chain / alliance chain	Public chain / alliance chain
Do you need an incentive layer (Dig a hole)	Yes	Yes	Yes	No, if you need to achieve something like Mining rewards can be used off-chainScript implementation
Consensus algorithm	POW	DPOS	DPOS	POP
Consensus interval (Block generation time)	About 10 seconds	3 seconds (Not certified in practice)	2 seconds (Not certified in practice)	1 second (time can be configured) (Not certified in practice)
Delay	At present, it is generally used for more than 1 minute, and the settlement time may be greatly delayed when the network is congested	1.5 seconds (Not certified in practice)	≥1.5 seconds (Not certified in practice)	1.5 seconds (Practice certification)
Throughput (TPS)	About 25	>500 (Data source: 16 years Babbitt's submission copy: http://www.8btc.com/elwingao-blovkchain-6 (The white paper says 100,000, But the test conditions 0.1K for each transaction, (No signature authentication, no hash calculation)	"5000" (The EOS team claimed in an open letter in 2018 that the test conditions have not been confirmed; the original white paper claims to be up to 1 million) The actual test report after the mainnet release is 1000TPS	4000(Ppractice certification)
Encryption Algorithm	AES,secp256K1 (Elliptic curve)	secp256K1 (Elliptic curve)	secp256K1 (Elliptic curve)	AES 、 ECDH 、 secp 256K1(Signature algorithm) 、 ED25519(Signature algorithm) Support national secret algorithm replacement -SM2,SM3,SM4
Database	LevelDB	Not sure	Mongo_db(plugin) Memory mapped file - Database	RocksDB,NuDB 、 SQLCILE The underlying database is replaceable and can be connected to the application ORACLE/MYSQL,SQLITE 、 SQLSERVER 、 DB2 、 Hbase Traditional database

	ETH	BTS 2.0	EOS	C B V Public chain
Whether the application can be executed in parallel	Yes	Yes	Yes	Yes
Whether users need to pay for use	Need	Need	Users need to pay for storing data. here is no need to pay for the account. DAPP developers need to pay for the platform.	Can be customized according to needs
Smart contract	Yes	Yes	Yes; currently the scripting language can be integrated with EOSvia API	Yes, Solidity language supports both SQL operations and message transaction support; currently the scripting language can be integrated with CBV through API
Can you connect to the virtual machine	EVM	Yes	In development (WREN,WASM,EVM)	Yes
Can cross-chain interaction	No	No related description	Yes	Yes
Whether you can customize assets	Yes	Yes	Yes	Yes
Is it currently used	Yes	Yes	No	Yes

2. Technical characteristics of **C B V**

1. Fairness, transparency, openness and autonomy

The introduction of blockchain technology and ideas can allow all institutions or individuals to participate in the data sharing and open movement in a fair and trustless manner without the endorsement of any central organization. All institutions or individuals only need to agree to these rules based on cryptography and data, and then they can voluntarily join the autonomous alliance and become a node on the CBV, open, trade or use the data platform. No one can control it.

3.2.2 User privacy protection and user data confirmation

The unified digital identity is used to uniformly map the different identities of users in multiple devices and multiple scenarios on the network. It can be used for cross-screen and cross-application merging of user data, and unified login. The user's personal data is completely owned by the user, and the user has full control of the private key, and the user decides who to authorize and how to charge, and it can be tracked throughout the process.

3.3. Support DAPPdevelopment

The C B V public chain platform supports developers to develop DAP Pon it, and the implementation methods are divided into the following two ways.

1. Realized by on-chain database transactions

The API provides an interface for transaction operations. You can perform multiple operations on self-created tables or authorized tables at the same time, and perform multiple operations on multiple tables at the same time. If one of these operations fails, the overall transaction operation fails.

Through the above functions, developers can establish a database table supporting their DAPP on the chain to realize the direct connection of DAPP to the blockchain-based database. The scripting language under the chain is integrated with the blockchain through API to realize the direct underlying data of DAPP. Store on the chain.

2. Realized by on-chain virtual machine

CBV introduces virtual machine functions. Its architecture is very simple

-ilar to JVM and .NET Runtime. It is similar to a virtual CPU. It is responsible

-sible for reading and executing the instructions in the contract in order, and performing process control, arithmetic operations, logical operations, etc. according to the functions of the

instructions. . It has good startup speed and versatility, suitable for the development of lightweight programs, and can also be

transplanted to non-block-chain scenarios, or integrated with IDE to provide a good development experience. The function of the

JIT(just-in-time compiler) mechanism can be introduced to improve the execution efficiency of instructions.

Developers can write DAPP in the Solidity development language on the virtual machine.

4. Design safety

1. Security of the chain

Use national secret algorithms that comply with national network and information security strategies.

Key management. Key management includes key generation (account generation), key transmission, and signature authentication, and SM2 asymmetric encryption algorithm is required.

Instructions:

(1) Use SM2 to generate a public and private key pair, and then base58 encode the public key to obtain the account address.

(2) When transmitting or transferring the symmetric password, use the public key to encrypt, and then use the private key to decrypt to obtain the symmetric password.

(3) To send a transaction to the blockchain, the user has to sign with his own private key and bring his own public key information.

When

other nodes on the network verify the validity of the transaction, use

The public key performs signature verification to confirm that it is a transaction sent by this account. When generating a block, a node will set up multiple trusted accounts locally, and configure the public keys of these accounts, so that when receiving block data from other points, only those who can pass the signature authentication, we The block is considered valid.

Information proofreading: The SM3 algorithm is used in the process of document information proofreading, which can effectively prevent data tampering. Combine multiple fields in a transaction, or some fields in a block, to generate a value that uniquely identifies the transaction or difference, that is, a hash value. How to use: Combine important fields in a certain data structure into a string, perform SM3, and get a unique value, 256bit.

Operation encryption and authorization: use SM4 symmetric encryption algorithm. The symmetric encryption algorithm is used when encrypting the operation of the database table, so that even

if other

people know the basic information of the blockchain transaction, they cannot know the specific SQL operation for a table. Usage:

When creating a table, the key is encrypted by the public key of the owner of the table and placed in the table data structure of the blockchain, and the key is told to the user who operates the table through authorization. If user A is authorized, the owner of the table uses his own private key to decrypt the symmetric key that has been encrypted by himself, and then encrypts it with user A's public key and puts it into the data structure of A, so that A passes his own private key to get the real symmetric key and the right to operate the database.

3.4.2 Data Transmission Security

The system supports the implementation of TLS technology based on the national secret algorithm.

TLS is a security protocol that provides security and data integrity for network communications. Before establishing secure communication, the sender and receiver will exchange some necessary information, negotiate the cipher suite used for secure communication, verify the identity of the other party, encrypt data to prevent data from being stolen, and verify data integrity. In this

cryptographic software including TLS functions can be integrated in each node without the need to deploy hardware devices.

3.4 Side chain technology

Side-chain technology actually refers to a blockchain that follows a certain side-chain protocol. Through the rules of the protocol, a certain currency is transferred from its main chain to the blockchain. The side chain is a different technical architecture completely different from the main chain and does not belong to the main chain. The current main chain is mainly Bitcoin.



How side chains work

There are many ways to work on side chains, and the common ones are single custody and contract alliance.

1) Single custody transfers the assets of the main chain to an intermediate party for custody and then to the side chain, which is the

simplest way to achieve two-way targeting. Daily digital asset trading institutions, Bitcoin wallets, are mostly implemented in this way.

Blockchain is decentralized, but most digital asset trading institutions are centralized, and single custody is realized by a third-party institution. There are also centralization issues, which is obviously not the best sidechain solution.

2) Contract alliances have certain advantages in terms of quantity. Single custody transfers assets to one custodian, and the contract method transfers the control of the frozen assets to a multi-signature contract address. This signature is implemented by multiple parties that follow the contract (custodial rules). More numbers, decentralization, multiple authentication, and security performance will also improve.

CBV specializes in creating profile technology for this purpose, to create overall empowerment for users, and escort from assets to industries.

3.5 Introduction to consensus algorithm

The adoption of different consensus algorithms on the blockchain

will have different effects on the consensus efficiency and decentralization of the system.

The PoP (Proof of Peers) consensus algorithm adopted by the CBV public chain refers to the original consensus algorithm (RPCA) of the PBFT consensus mechanism

It has been optimized to improve the efficiency of transaction consensus while taking into account security. The main optimizations are:

1. Increase the transaction throughput rate by increasing the transaction pool;
2. Improve the transaction receiving speed by sorting out the transaction verification process and appropriately simplifying the verification process of receiving transactions;
3. Improve the efficiency of transaction set consensus by using leader's proposal for transaction set consensus;
4. The number of transaction executions is reduced from the original 2-3 times to only once.

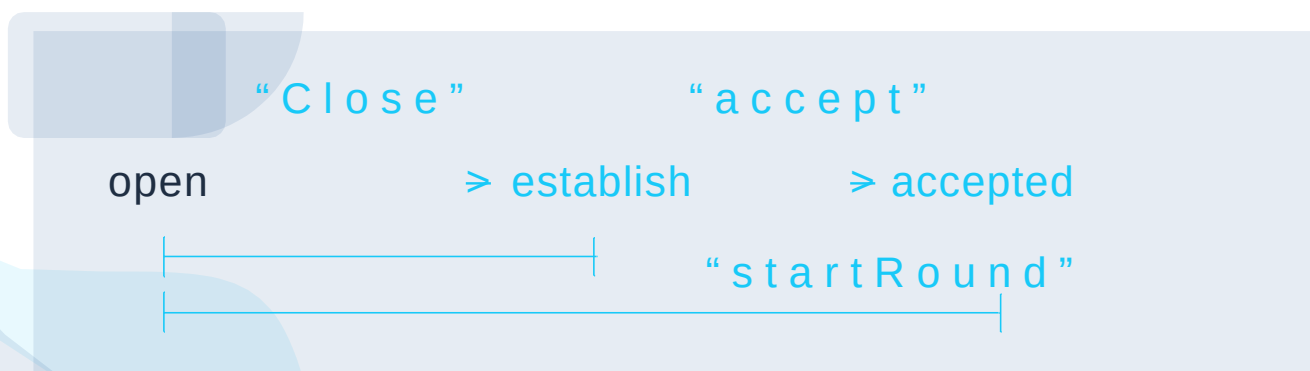
The original RPCA consensus is also a two-round 2/3 consensus

process. Similar to PBFT, the difference is that PBFT is a leader proposal mechanism, while RPCA is an equal proposal mechanism for

all nodes. From this perspective, RPCA is relatively more decentralized a little.

3.5.1 RPCA consensus process

1. Each node collects transactions.
2. Each node judges that the closeLedger condition is met, and starts to propose its own transaction TmProposeSet, and enters the establish phase from open.
3. Each node negotiates the transaction set differences, exchanges the transaction set to reach a consensus, and enters the accepted stage.
4. Each node generates a block according to the transaction set, and broadcasts the block TMValidation, and enters the open phase of the next block.
5. Each node collects quorum Validation, and the block reaches a consensus.



3.5.2 PoP consensus process

The current PoP consensus algorithm has modified the two and three steps of the RPCA consensus, and the process is as follows:

1. Each node collects transactions
2. The leader points continuously withdrawing transactions from the trading pool
3. The leader node judges that the closeLedger condition is reached, and starts to propose its own transaction set TMProposeSet.
4. After receiving the transaction set broadcast by the leader node, the ordinary node first asks the leader node for the header information of the transaction set, and then can determine which transactions it does not have, and ask the leader for the transactions it lacks.

5. After each node collects the complete transaction set, it broadcasts its vote to all other nodes, which is the TMProposeSet

6. Each node collects votes from other nodes in the transaction set, reaches the quorum condition, and enters the accepted stage.

7. Each node generates a block according to the transaction set, and broadcasts the block TMValidation, and enters the open phase of the next block at the same time.

8. Each node collects quorum Validation, and the block reaches a consensus

▮ //leader Calculation formula

▮ $\text{Leader_idx} = (\text{View} + \text{BLOCK_NUMBER}) \% \text{NODE_NUM}$

On the other hand, because it is the mechanism of the leader proposal, there must be a corresponding fault tolerance mechanism. Here, like PBFT, the view_change mechanism parallel to the transaction set consensus process is added:

1. The initial view is 0.

2. Each timer judges that the transaction set consensus has timed out. The default timeout period is 3 seconds and is configurable.

3. If the transaction set consensus is not reached within the timeout,

the node broadcasts the view_change message.

4. The node collects view_change messages to reach quorum, then $\text{view}++$ and changes the current block leader.

5. The new leader restarts the transaction set consensus.

04

CBV's system architecture

1. Data layer
2. Network layer
3. Consensus layer
4. Conversion layer
5. Smart Contract
6. Application layer

CBV's system architecture

The overall technical architecture of C B V will use the classic six-layer blockchain architecture, which includes the application layer, consensus layer, incentive layer, contract layer, network layer, and data layer. Each layer completes a core function, and each layer cooperates with each other to realize a decentralized trust mechanism.

4.1 Data layer

The data layer is the bottom layer of the blockchain model, and the data layer describes the chain structure of the block. In addition,

C B V has built a digital identity system for users. That is, the platform generates a set of asymmetrically encrypted public and private keys for each user, and the private key can only be accessed by the user. The user's personal data is signed and written by the public key.

Only the person with the private key can view the original data. The private key means the sole control of the data. In order to realize the trusted on-chain of user data, safe storage and convenient transactions, CBV adopts the following technologies:

Multi-signature technology digital signature (also known as public key digital signature, electronicsignature)

2. Network layer

CBV's network bottom communication network adopts P2P architecture, P2P is the abbreviation of English Peer-to-Peer, called "peer-to-peer network" or "point-to-point" technology. In the P2P system, each node (Peer) is an equal participant and assumes the two roles of service user and service provider. The ownership and control of resources are dispersed to every node of the network. P2P technology makes communication on the network easier and more direct, and reduces the reliance on intermediate servers to a minimum. It supports the efficient and stable operation of the CBV blockchain system.

3. Consensus layer

CBV uses the classic DPOS consensus mechanism to determine the mining rights of the block. By allowing each CBV Token holder to vote, the 101 representatives with the most votes will perform transaction package calculation. The rights of these 101 super nodes are equal to each other. Each representative generates blocks in turn according to a set schedule. Compared with Bitcoin's POW mechanism, the advantage of choosing the DPOS solution is that through different strategies, a small group of nodes are selected from time to time, and this small group of nodes does the creation, verification, signature and mutual supervision of new blocks, which greatly

increases It reduces the time and computing power required for block creation and confirmation. The DPOS mechanism can usually reach a transaction speed of 10,000 transactions per second, and can reach the level of 100,000 transactions per second when the network latency is low.

4.4 Conversion layer

The conversion layer is a very important setting of the public chain ecology. It is mainly responsible for the issuance system and distribution system of ecological data conversion. Users can mine the corresponding point candy by contributing the computing power generated by the data of their behavior and habits. The APP ecosystem of the end application converts the generated points into corresponding value manifestations. In addition, the DPOSconsensus mechanism pays more attention to the mutual cooperation and mutual supervision between block producers. This mechanism enables the transformation layer to function more efficiently.

The function consumption in C B V adopts the token consumption mode.

C B V is mainly used for side chain merchants to settle in to obtain the qualification to issue tokens, activate the pre-sale product

fuel, activate the mining pool as fuel, and circulation handling fees. After the user confirms the data rights in normal operations, the data contributes. The income generated by the mining of computing power will be settled with each side chain token that is settled. It also includes sidechain tokens rewarded by recommending others to contribute to the computing power of behavioral data.

Not only that, C B V will also be used for the payment of future offline physical ecological scenarios, and can exchange value with main-stream digital assets, becoming the only embodiment of CBV's entire public chain circulation.

At the same time, C B V will establish a wealth of application scenarios, and C B V will be the first to go online on mainstream exchanges.

The CBV in the hands of users can be directly exchanged for cash in exchanges through transactions, or consumed through CBV ecological circulation. This system of computing power mining through data confirmation and conversion to produce C B V maximizes the enthusiasm of platform users. It can promote CBV to establish the basis of traffic and a huge database at the fastest speed.

4.5 Smart Contract

Blockchain technology provides a safe and reliable execution

environment for smart contracts, and promotes the realization of smart contract concepts. A smart contract is an event-driven, stateful program that runs on a reproducible and shareable ledger and can keep the assets on the ledger. Its purpose is to enable a complex set of digital commitments with trigger conditions to follow. The will of the participants is executed correctly. Smart contracts can not only receive and store value, but also send information and value outward. The entire process can be automated and intelligently executed under the premise of no center and trust.

The design of smart contracts requires a balance between security and functionality. Existing blockchain projects mainly focus on the design of a single type of smart contract, and seek a balance between security and functionality under the limited types of smart contracts, which often fails to meet the needs of diverse user groups and user diversified transactions. The desired effect of demand. The transaction script of the Bitcoin blockchain is the embryonic form of a smart contract. It is a non-Turing complete smart contract with low complexity and lightweight advantages. It has not been safe in the operation of the Bitcoin blockchain network for nearly ten years.

Problem, but the Bitcoin transaction verification script supports very limited functions and is only used for payment verification.

The

Ethereum blockchain supports Turing complete smart contracts

written in the Solidity high-level language, which greatly enriches

functions of smart contracts and expands the application fields of blockchain technology. However, writing Ethereum smart contracts is prone to security vulnerabilities. The DAO incident It is precisely because of the security loopholes in the written Ethereum smart contract that the Ethereum community is split.

CBV adopts a hierarchical thinking similar to the computer storage system structure in the realization of smart contract functions.

Moses Virtual Machine (MVM) supports declarative non-Turing complete smart contracts and advanced Turing complete smart contracts.

Users choose to use these two types of contracts based on their experience and transaction requirements, balancing calculation security and calculation functions, as well as calculation fees and calculation complexity, to meet the diverse needs of transactions.

Declarative smart contracts are simple to deploy, have high security, and are closer to the legal contract language; advanced Turing complete smart contracts are relatively difficult to deploy, and are mainly used to develop DApps with more complex program logic. The two types of smart contract deployment have different fee mechanisms. The fee for declarative smart contracts is calculated based on the bytes occupied by the contract, while the advanced Turing complete smart contract uses the CBV consumed when the program is running as the fee.

4.6 Application layer

Like the application layer in the traditional OSI model, the application layer of CBV provides an interface for application software. It also provides client-side packaging in multiple languages to simplify the calling process. The supported languages include C/C++, C#, Javascript, Python/MeshPython, Go, etc. Simplified cross-chain interaction components provided by the application layer, including MP-Client, DES-SDK, BaaS-SDK, CLI_Wallet, can realize CBV and Para-chain, App-chain and Distributed Business alliances Inter-chain communication between chains (Consortium Chain).



05

Equity model

1. CBVtoken issuance plan
2. Distribution plan

Equity model

Unlimited depth commission is the main feature in CBV. In the early days, we will open it to stablecoins, such as setting special equity

models, etc. According to the unique C B V algorithm,

we will instant user orders with cross-

chain cooperation in the market The agree-ment will be docked,

and at the same time, a corresponding propor-

tion of stablecoins will be developed to realize unlimited deep trad-

ing of stablecoin pairs. At the same time, for newly listed Tokens,

we will also encourage new types of services, whether it is a low-

liquidity token with insufficient liquidity or a Token with ample

capital pool, which can be greatly optimized through the

CBV equity income agreement.

5.1 C B V token issuance plan

Token name: CBV

Total circulation: 10 billion

Obtaining method: through data right confirmation, invocation and use of data activity rewards, value redistribution, and data computing power mining.

Purpose:

T1. It can be directly exchanged to the exchange for cash;

2.It can be used as a basic fuel for consumption in future ecological scenarios;

3.It can be used as value points for the conversion and use of points

in various ecological applications, and it can also be directly converted and realized with mainstream digital assets.in various ecological applications, and it can also be directly converted and realized with mainstream digital assets.

06

Ecological application scenarios

1. Merchant APP
2. Confirm personal data rights
3. Decentralized Mobile Social
4. Medical and health field
5. Points Mall
- 6. C B V** Enterprise Alliance
7. Third-party access
8. Full platform layout

Ecological application scenarios

CBV's side-chain equity model provides us with a variety of cross-chain ecological choices and considerations. As an inclusive contact facility, we will also be committed to the establishment of a cross-chain ecology, whether it is a transient cross-chain or inter-chain asset. All of the communication protocols will be the focus of CBV in the future.

There are a large number of excellent protocols to choose from in the market. We will also build an important bridge between the protocol and the protocol, not only the communication between the chains, but also the completion of the agreement. So far, Turing's complete modular financial system can be realized by the communication between them.

6.1 Merchant APP

In the traditional third-party payment system, payment terminal|merchant terminal|channel terminal|settlement terminal|account terminal is a linear structure, and there is no interaction and feedback between the levels.

In the overall ecology of the **CBV** public chain, payment

terminal|merchant terminal|channel terminal|settlement terminal|account terminal are the co-builders of the same ecosystem, and they are all ecological roles in a certain payment scenario of CBV public chain. Payment behavior in **C B V** is the result of the participation of these five.

In C B V 's merchant APP system, payment logic in different fields will be built to carry out various circulation links of online and offline, on-chain and off-chain, and cross-chain of the main chain. APP payment interfaces and dynamic payment codes will be built online. ATM machines/payment cards will be laid down, and users' personal credit cards will be bound with **C B V**'s on-chain payment tools to facilitate smooth and safe payments in various scenarios.

6.3 Decentralized Mobile Social

Social has a strong attraction to users, and it is also a rigid demand for most users. This has prompted social networks to become one of the most basic and important applications in the Internet era. Global social network users accounted for 73.9% of Internet users in 2019, which is a huge group. So far, the blockchain still does not have an application that covers a large-scale mainstream population, and social networking is undoubtedly a good direction for blockchain to

quickly enter the mainstream population. At present, Internet-based social networks have many pain points, such as information fraud, insufficient security, proliferation of low-quality content, and content exporters not getting their due income rights.

The blockchain social application based on CBV can better solve some of the pain points of existing Internet-based social networks. Data storage on the chain and asymmetric encryption can ensure the authenticity and security of user information. Real and credible data exchange allows users to exchange information with peace of mind, reducing information asymmetry in social interaction. Decentralized social platforms can keep users away from the forced distribution of Internet platforms, return content review rights to users, and improve the content quality of the platform. In addition, the introduction of the Token economy can better stimulate the output of high-quality content.

CBV-based social applications can also provide users with more convenient and accurate social services through massive amounts of data on the chain. We believe that blockchain technology and the massive data on CBV can well enable social applications and help the rapid implementation of blockchain social applications.

4. Medical and health field

The medical industry is an important industry related to people's livelihood, and the scale of the industry is huge. The 2020 epidemic has made people understand the importance of the medical and health industry, and blockchain also has a huge room for development in the medical industry. Based on the characteristics of CBV data confirmation and traceability, in the future, people can trace every transaction between drug manufacturers, wholesalers, pharmaceutical companies and patients on CBV. Verification and protection are important for tracking counterfeit drugs and other issues. Drug information.

5. Points Mall

In addition to the above areas, there will be tens of thousands of applications in the **CBV** ecosystem in the future, serving the needs of consumers around the world. Among them, the Points Mall will be the first to launch. The Points Mall will connect with mainstream apps on the market and open up the points redemption channel between CBV and these apps, including Tmall, JD, Taobao, Didi, Meituan, Ctrip, iQiyi, etc. While users enjoy all-round services, their CBV value will be maximized.

6. CBV Enterprise Alliance

The enterprise alliance aims to carry out technical exchanges and

industrial cooperation among enterprises from all over the world, build private and government cooperation platforms, enterprise cooperation and exchange platforms, and build economic development industrial parks. Committed to improving the competitiveness of global consumer industries and enterprises, actively responding to the United Nations, World Bank and other institutions to jointly promote economic development in the post-epidemic era, and assisting in solving global and regional environmental problems.

The alliance has experts in various fields around the world, and has offices, R&D and promotion agencies in the United States, Germany, Russia, Britain, Spain, Israel, Romania, Hong Kong and other countries and regions to develop and integrate world industrial advantages and related Technology and promote its worldwide industrialization and application. CBV Enterprise Alliance is committed to gathering world elites and jointly promoting the development of global economic undertakings.

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6.7 Special customized rights mining

All enterprises can publish their own rights and interests mining services through **C B V**. By uploading their data to the chain, the data will be turned into a side chain of the **C B V** public chain.

All enterprise data will be uploaded to the chain, and a consensus will be created. An equity model exclusive to the enterprise, eliminating all intermediaries, handling fees and other costs, saving costs,

improving efficiency. At the same time, under the operation of the equity model, all enterprises will diversify the advantages and characteristics of the enterprise, and even give Small and medium-sized enterprises realize the opportunity of overtaking on the curve.

The equity mining model allows companies to retain the user groups targeted by companies. By providing services to users, companies will obtain benefits, and users will also obtain token benefits through services such as providing data or consumption in the company, allowing companies and users to achieve a win-win situation. The situation allows the audience and users of the enterprise to become durable and viable.

6.8 Full platform layout

In addition to the above areas, there will be tens of thousands of applications in the C B V ecosystem in the future, serving the needs of consumers around the world. Among them, the DAPP platform will be launched first.

The DAPP platform will dock with mainstream apps on the market. **C B V** supports multiple clients such as Web, desktop apps, and mobile apps. Users can use and manage assets on both mobile phones and computers, which greatly facilitates customers.



07

Foundation introduction

1. Foundation establishment
2. Decision Committee

Foundation introduction

7.1 Foundation establishment

The C B V Foundation (hereinafter referred to as the "Foundation") is a foundation established in Singapore.

The C B V Foundation is committed to the development and construction of the C B V community, advocacy and promotion of governance transparency, and promote the safe and harmonious development of an open source ecological society. The C B V community ensures the safety and trustworthiness of accounts and assets through blockchain consensus,

non-tamperable technologies and security measures such as digital signatures and encrypted wallets.

In the early days of the foundation, the decision-making committee was composed of the chairman of the foundation, core members of the C B V community creation team, super messengers and corner

-stone institutions. The term of office of each council member is two years.

In addition to serving and promoting the C B V community project itself, the foundation is also committed to using the value generated by the project to support the growth of ecological members. The foundation will allocate a certain amount of

funds every year to provide project funding support of varying

projects with potential in the ecology to help them grow faster; at the same time, the foundation has set up special seed incubation funds to help The start-up team can quickly implement ideas. The foundation will continue to provide strong support and investment in the ecology of the C B V community. The purpose is to drive the upstream and downstream nodes of the ecology to quickly achieve leapfrog development from technology to application, from the single point of prosperity of the C B V community to the entire ecological cycle system prosperity.

7.2 Decision Committee

The C V B Community Foundation establishes a decision-making committee, which must maintain high standards of integrity and ethical business conduct; comply with relevant laws and regulations and industry self-discipline principles; provide transparent financial management; C V B community will invite third-party audit institutions to the foundation Audit and appraise the use of funds, cost expenditures, profit distribution, etc. The functions of the decision-making committee include appointing or dismissing executive heads and heads of functional committees, making important decisions, and holding emergency meetings. Its responsibilities are equivalent to the board of directors, with the right to appoint and remove personnel.



08

Strategic layout

Strategic layout

The blockchain market is a global trading market that operates around the clock. In this active market, a large number of transactions are going on every minute and every second. Its huge volatility can not only bring huge profits to investors, but also may cause huge losses. Therefore, traders are faced with many pressures and challenges in the process of implementing buying and selling decisions. The 24-hour uninterrupted operation of the market also brings a lot of trouble to manual operation.

As a fund that tracks mainstream currencies, **CBV** aims to reduce the tracking error with the underlying index. Investors can quickly establish positions by buying **CBV**, saving the cost of choosing and buying and selling digital assets, and long-term holding is more effective.

Achieve convenient tracking of mainstream currencies. **CBV** also provides customers with automated quantitative trading services, able to keep an eye on every investment opportunity and analyze trading risks at all times. It also provides investors with multifunctional investment products that include short-term investment, construction of hedging, reduction of digital assets in exchange for **CBV**, and precise matching of investment patterns. In the future,

Block will

CB
V

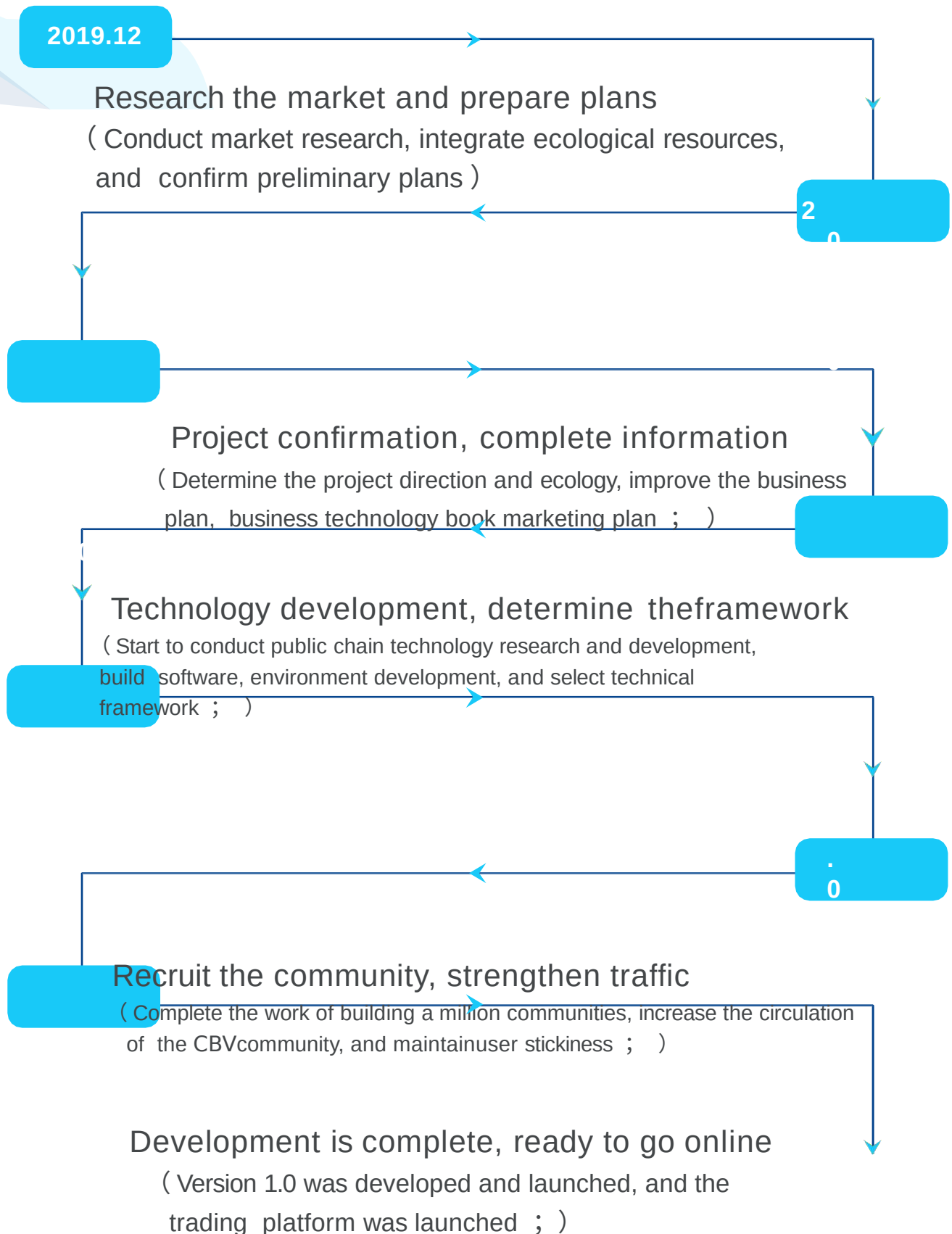
also cooperate with mainstream wallets, exchanges and traditional index institutions to provide more investment interfaces, acquire more users, and strengthen the CBVecosystem.

The business scope of the **CBV**ecosystem covers global investment users. Independent operation centers have been established in Thailand, Singapore, the United States, Japan, South Korea, Hong Kong and other countries and regions, and are committed to gradually implementing the global mapping of the **CBV** main network and completing all-round applications. Docking and development. At the same time, CBV will focus on high-quality digital asset investment opportunities, carry out high-quality project incubation, and provide more than 100 pairs of digital asset product trading and investment services in the ecosystem, truly implementing scenarios and diverse ecosystems A win-win situation.

09

Milestone planning

Milestone planning





10

Legal Notices

Legal Notices

As a new investment model, digital asset investment has various risks. Therefore, investors need to carefully evaluate investment risks and their own risk tolerance before proceeding with specific operations.

1. Policy risks are based on the current unclear supervision of block-chain projects and digital asset swaps in some countries, and there may be a certain possibility of losses for participants due to policy reasons.

2. Regulatory risks Currently, digital asset transactions are subject to certain uncertainties. Due to the lack of strong supervision in the field of digital asset transactions, digital asset tokens may rise and fall sharply. If individual participants lack experience after entering the market, it may be difficult to resist the asset shock and psychological pressure caused by the instability of time. It is undeniable that in the foreseeable future, there will be regulations issued to restrict and regulate the blockchain and electronic token fields. If the regulatory body conducts standardized management in this field, the tokens purchased during the swap period may be affected,

including but not limited to fluctuations or restrictions in price and ease of sale.

3. Market risk In the digital currency trading market, if the overall value of the digital asset market is overestimated, investment risks may increase. Participants may have too high expectations for the growth of swap projects, and they may have too high expectations. Will not be possible.

4. Competitive risks With the development of information technology and mobile Internet, digital assets represented by "Bitcoin" have gradually emerged, various decentralized applications will continue to emerge, and competition in the industry will become increasingly fierce. However, with the emergence and continuous expansion of other application platforms, the community will face continuous operational pressure and certain market competition risks.

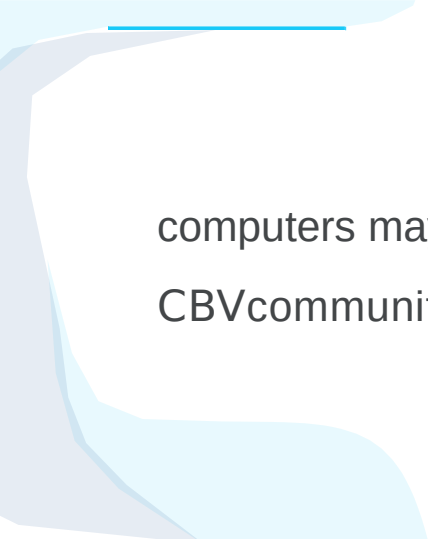
5. Token sales market risk. Because the token sales market environment is inseparable from the overall digital asset market situation, if the market is generally depressed, or due to other uncontrollable factors, it may cause the token itself to have a good prospect, but the price is still long-term underestimated.

6. The risk of hackers or theft Hackers and other organizations or countries have the possibility of trying to interrupt the functions of the C B V community in any way, including but not limited to a series of attacks such as denial of service attacks, Sybil attacks, guerrilla attacks, and malware attacks.

7. The risk of uninsured loss CBVcommunity is not like bank accounts or accounts of other financial institutions. There is usually no insurance protection stored in CBVcommunity accounts or related blockchain networks. There will be no public loss under any circumstances. Individual organizations underwrite your losses.

8. Systemic risks. Fatal flaws overlooked in CBVcommunity software or risks caused by large-scale failures of global network infrastructure. Although some of these risks will be greatly reduced over time, such as fixing vulnerabilities and breaking computing bottlenecks, others Some risks remain unpredictable, such as political factors or natural disasters that may cause partial or global Internet disruption.

9. The risk of vulnerabilities or the accelerated development of cryptography. The accelerated development of cryptography or the development of technology such as the development of quantum



computers may bring the risk of cracking to the
CBVcommunity, which may lead to the loss of CBV.



Risk warning

Risk warning

This document is only used for the purpose of conveying information and does not constitute relevant opinions on the purchase and sale of digital assets. Any similar proposals or suggestions will be carried out under a trusted clause and permitted by applicable laws. The above information or analysis does not constitute investment decisions, or specific recommendations.

This document does not constitute any investment advice, investment intention or abetting investment regarding digital assets. This document does not constitute and is not understood to provide any buying or selling, or any invitation to buy or sell digital assets in any form, nor is it any form of contract or promise.

The C B V community is not responsible for any direct or indirect losses caused by participating in the C B V project, including but not limited to:

- 1), the reliability of all information provided in this document
- 2) Any errors, negligence or inaccurate information arising therefrom
- 3), or any behavior resulting from it.

In addition, if users who use CBV incorrectly lose their wallet private key, they may lose all their rights to use CBV, or even their C B V . CBV is not a kind of ownership or control. Owning CBV does not mean ownership of the relevant personnel of the decentralized platform of the C B V community.

CBV does not grant any individual the right to participate in, control, or make decisions about the decentralized platform of the C B V community.

Let us suffocate for the sake of dreams ! ! !