BitCherry

BitCherry Distributed

E-Commerce Network

White Paper

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Ⅰ.Project Overview

Since the introduction of bitcoin by Satoshi Nakamoto in 2008, blockchain technology has been rapidly developing, bringing revolutionary changes to a wide range of industries and businesses. Through data encryption, time stamping, distributed consensus, and economic incentives, the peer-to-peer trading, coordination, and collaboration with decentralized credits are implemented in distributed systems of which there is no need for nodes to trust each other, thus solving the issues on high cost, low efficiency, and insecure data storage common in centralized organizations. The many features of blockchain technology can be used naturally to solve many problems in the e-commerce industry, thus empowering e-commerce and creating new business patterns.

E-commerce refers to the integrated product of social media and e-commerce that helps users make purchasing decisions and behaviors through user self-propagation and behaviors such as sharing and likes by taking social media as a means of transmission.

Blockchain technology provides new technology incentive for the e-commerce industry. The features including traceability, immutability, and tokenization of blockchain technology are able to respectively solve the industry pain points including product traceability, logistics supervision, and community incentives. Instead of the centralized models in traditional e-commerce platforms, the distributed e-commerce platform creates a new O2O business ecosystem through decentralization. Social-based distributed e-commerce users are merchants, and consumers and merchants form a two-way profit relationship on consumption interaction. In traditional e-commerce, consumers only trust in the platforms, while the current e-commerce takes the advantage of the reform brought by the blockchain technology.

1.1 Market Pain Points

Currently, the following pain points generally exist in most of centralized e-commerce industry:

Pain point 1: Centralized e-commerce monopolizes the ecosystem values and profits while encroaching on the ecosystem participants' rights and interests.

With the development of traditional e-commerce up to now, all the entrance traffic is entirely monopolized by a few e-commerce platforms. While people enjoy the benefits and convenience of e-commerce, manufacturers have lost pricing power and users have lost bargaining power. The Chinese e-commerce market has been fully divided up, and traffic cost of the traditional platform e-commerce model becomes more and more expensive. Since traffic is monopolized by the platform, merchants can only let the platform exploit them at will. In the centralized platform, the information between merchants and users is asymmetric. The profit model of selling user traffic to merchants on the platform will inevitably lead to the lack of open and transparent matching between the supply side and the demand side. The

unilateral control of data flow makes the competition mechanism completely manipulated by the platform, which renders merchants pay a huge customer acquisition cost of up to 15%. As far as consumers are concerned, they have lost the ownership and control of their own data. Their data are used by platforms and merchants, and the profits are owned by platforms, which have nothing to do with consumers.

Pain point 2: Centralized e-commerce is a monopoly and trading cost is expensive for participants.

Transaction costs of participants in e-commerce platforms include advertising, marketing costs and customer acquisition costs. Centralized e-commerce platforms constantly strengthen "precision marketing", however their model can not break the traffic distribution curse between increasing sellers and limited buyers, and the final consequence turns out to be "winner is who pays highest", that is, which the seller pays more advertising fees can get more traffic. This undoubtedly adds to the costs of participants. In addition, customer acquisition costs of e-commerce platforms are rising rapidly. According to the statistical report, the growth of online retail in China has slowed down in recent years, and the cost of customer acquisition has increased. Take Taobao and JD as examples, the customer acquisition costs of them were 122 yuan and 134 yuan respectively in 2015, but these costs had exceeded 200 yuan by the second quarter of 2017, having rised by 154% and 68% respectively. After years of rapid development in the e-commerce industry, the demographic dividend of Chinese Internet era has been gradually digested, and the growth of online users has slowed down. Enterprises from various industries started to join online traffic scramble, forcing online traffic costs to rise and cutting in corporate profits space further. Meanwhile, mainstream head e-commerce platforms suffers from yearly increasing marketing costs for new active online users, and year 2015 and 2016 are the critical points, during which the average online customer accquisition cost rised over 200 yuan, even more than offline customer acquisition cost. At present, the e-commerce industry is facing the dilemma of increasing customer acquisition cost and increasing difficulty of attracting new customers.
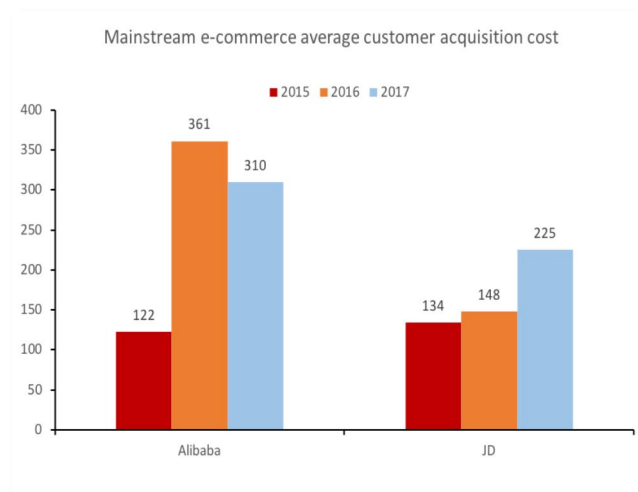

Figure 1-1: Mainstream e-commerce average customer acquisition cost

Pain point 3: Sole and Inefficient Incentive Mechanism and difficult customer deposition.

Three cores of E-commerce: scene + content + community. Among them, community is the basis of e-commerce operation, the driving force of the whole chain, and is the core force of consensus condensation. Only by stimulating the enthusiasm of users and actively disseminating content, can e-commerce platforms promote the purchase intention in a split way. However, the current incentive model of e-commerce is single, and it can only attract users through the point accumulating system with a lot of restrictions and low prices, failing to achieve the continuous growth of the number of users of the platform and repeated purchase rate. On the other hand, with the mushrooming of e-commerce platforms, users have more choices and are less likely to settle on one platform. As can be seen from the chart below, the active user growth rate of several mainstream e-commerce platforms is slow, or even negative.
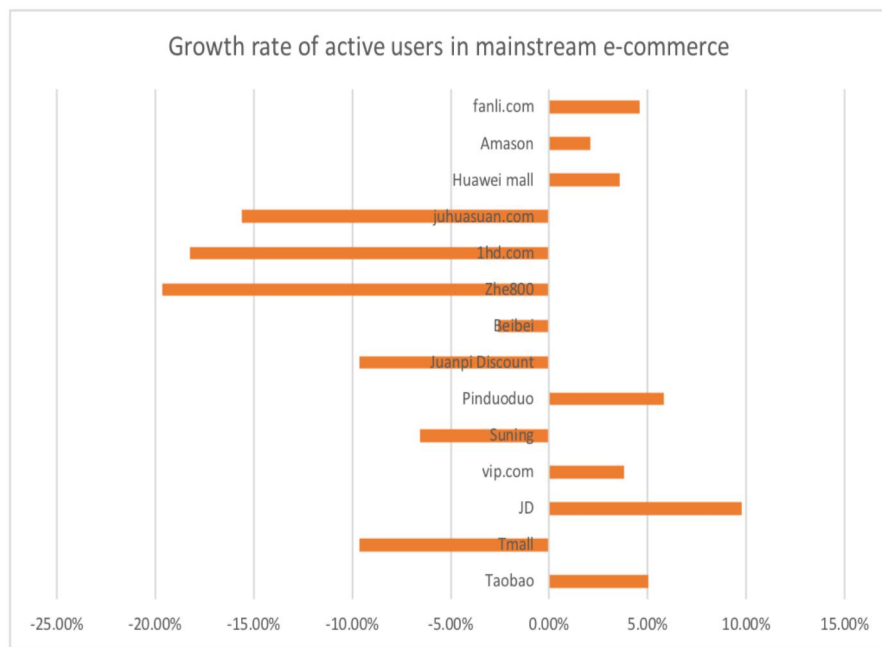
Figure 1-2: Growth rate of active users in mainstream e-commerce

Pain point 4: The organizational form of centralized e-commerce is relatively exclusive.

In the traditional e-commerce such as China's Tmall and JD, as well as the well-known Amazon and eBay in the United States, they are organized internally, while the platform e-commerce is more like a decentralized alliance aggregation with a number of points accumulating system and reward system with many restrictions, which are isolated from each other, greatly reducing the effectiveness of user incentive. In addition, various industries, platforms and shops operate independently, and users are scattered, so it is impossible to get through the whole ecosystem, give full play to the clustering effect, and stimulate the fissile properties of user groups in terms of communication and purchase.

Therefore, how to build a new, open and autonomous distributed e-commerce platform, enhance internal cohesion and strengthen internal collaboration is also an urgent problem for e-commerce.

Pain point 5: Lack of supply chain supervision leads to frequent product quality problems.

Currently, in some e-commerce platforms, barriers to entry is low for commodities, especially foods. Information audit is not strict to online shop owners in some online trading platform, and most online store operators are natural persons, while most of the online stores have not obtained licenses from commerce, health, food, tax and other relevant departments of the industry, becoming one of the main marketing way of fake and "3-none" products. Moreover, the shop management is generally simple and the operating conditions are generally difficult to meet the relevant criteria. Many shop owners plays a range of roles themselves from customer service to the boss. In addition, there are few operators take the initiative to apply for health certificates, operating permits and other licenses. Moreover, in logistics transportation process, online shopping goods distribution is more dependent on third party logistics enterprise, while logistics and transportation companies often mix all sorts of goods together for storage, transportation and distribution. Some of the logistics enterprise management is not standard; the goods piled up in dirty, chaotic and bad environments; savage transportation loading and unloading. All these lead to the problems such as damaged goods and food contamination.

Pain point 6: Centralized e-commerce platform data is stored and operated on centralized servers, and the security cannot be effectively guaranteed.

At present, all e-commerce platforms in the market have centralization issue, and these platforms store a large amount of user information and transaction data. However, recently a variety of illegal theft of user data emerge one after another. Some platforms sold commodity users' information to others in exchange for benefits. These kinds of behaviors make user privacy divulges, making it hard to safeguard consumer rights and interests. The China e-commerce research center has released the 2018 China e-commerce user experience and complaint monitoring report. Based on the annual user rights protection big data statistics of hundreds of mainstream e-commerce companies such as Taobao,Tmall, JD, Suning, Vipshop, Gome online, Amazon China, Pengduo, Jumei, Dangdang, Yihaodian and so on, "information leakage" is one of the "top ten hot complaints of retail e-commerce in 2018". According to a previous online survey of 1,000 users conducted by China e-commerce research center, 21.7% of users have experienced information leakage due to online shopping, BBS, WeChat, etc., and 11.2% of users have received suspected fraud calls. 56.8% of users expressed concern about the security of Internet information, and would be wary of Internet games and registration that require personal information to be filled in. Therefore, information leakage is a common phenomenon in the e-commerce market.

1.2 Solution

BitCherry distributed e-commerce network is committed to creating a super ecosystem covering all aspects of daily life. All participants in the community ecology, such as users, merchants, super nodes, operation nodes, etc., will open up the online and offline O2O e-commerce system by the everyone-participating and economy sharing token system, letting the entire ecology develop in a healthy, autonomous and benign way.

First of all, BitCherry distributed e-commerce network has established a sound economy sharing system. All participants of the platform may gain economy sharing through contribution points and trading behavior. Super nodes can obtain economy sharing rights via purchasing QR code machine /POS machine. Consumers will get corresponding ecological points for consumption behavior, which can be used to exchange the goods in the mall, or to get a rebate from the sellers when the points reach a certain amount. Merchants introduce consumers into the ecosystem continuously. While generating more sales revenue, they can also gain consumption dividend from consumers introduced by them when shopping in other shops. Therefore, every participant in the platform can share in the value of the ecosystem.

Second, BitCherry distributed e-commerce network aims to realize the community consensus and community autonomy through the token incentive allocation, establishing consensus of sharing customers and cross streaming among entity retail merchants, setting up the reward standard based on contribution level of community consensus maintenance and construction of community from all parties. Participants of the community can contribute their own strength to the development of the community. For example, merchants can allocate advertising slots through free-trading or voting mechanism. Traffic distribution within the community is also decided by the community internal discussion. The autonomy of the community will maximize the value flow of the entire ecosystem.

Finally, based on block chain technology, BitCherry distributed e-commerce network record the platform transaction data in the chain through unified, fair and effective consensus mechanism and the intelligent architecture, ensuring the uniqueness of trading, and effectively eliminating the issue of unilaterally counterfeiting, tampering with data, information disclosure by centralized platform to maximize interests as well as preventing merchants to cheat on transaction record and invoices for obtaining platform resources purpose, which actually destroys the fair competition in the whole ecosystem. In addition, the logistics and transportation information of commodities can also be recorded in the chain, so that the commodities with quality problems can be quickly traced back to the source.

The advanced blockchain technology architecture adopted by BitCherry distributed e-commerce network will overthrow the current e-commerce retail ecology, return data, traffic and value to the participants in the transaction, and effectively solve various disadvantages of the

centralized platform.

1.3 Project Advantage

BitCherry is the first distributed e-commerce network based on blockchain technology, which is committed to creating a super ecosystem covering all aspects of food, clothing, housing and transportation.

By opening the value connection between digital assets and physical businesses, the platform perfectly integrates powerful offline experiential services with highly efficient blockchain technology and distributed business forms, so as to provide a more efficient and valuable ecosystem for consumers, merchants and ecological community participants.

Based on the blockchain technology, this project adheres to the idea of fair, open and transparent governance, and creates a new open and distributed e-commerce network featuring community autonomy, everyone-participating and economy sharing. The project has the following advantages:

Solve the pain point of traditional e-commerce platforms, rapidly acquiring customers, and improve platform activity. The participation of various roles in the ecosystem can be greatly enhanced through various incentive methods, such as token incentive for consumption, customer accquisition rewards, exclusive membership, distributed and autonomous operation.

With the upgrading of consumption ability and consumption concept, consumers are no longer satisfied with the traditional online shopping mode. They hope to share after shopping, communicate with others about shopping experience, and showcase their clothes or daily supplies purchased. From the perspective of e-commerce platform, when users are shopping, the advise of other users who have the same needs or have purchased similar products can provide reference for users and thus promote the conversion rate of traffic on the platform. BitCherry distributed e-commerce has a strong community attribute. Taking shopping as the penetration point, consumers can post orders after shopping completion. They can communicate with each other in the form of thumb-ups or comments in the community, provide suggestions for other consumers, and promote the circulation of commodities and token in the platform.

Diversified settlement methods, including a variety of value flow certificate, greatly improve the value liquidity, giving full play to the fission effect of the user community. The distributed autonomous ecosystem breaks the organization boundary and promotes the coordinated development of the industry.

Blockchain has properties that cannot be tampered with and of traceability. Based on these properties, consumers' comments in the mall cannot be

tampered with, which can ensure the authenticity of the comments and help reduce consumers' doubts about the reputation of merchants. Through putting product and service on chain to promote value fidelity, open and transparency in the whole ecosystem, it fundamentally solves the problem of consumer distrust in product quality. In addition, the basic information, commodity information, transaction records and consumer evaluation provided by merchants are all recorded on the blockchain, so as to build a merchant integrity system, which will make the information of merchants transparent and open, improve the authenticity of information, and help ensure the integrity of the platform and the quality of merchants on the platform.

This platform uses smart contract to guarantee transactions, and all transactions are carried out automatically to improve the trading efficiency and ensure a smooth trading system. At the same time, smart contract guarantees and enhances the credibility of the transaction.

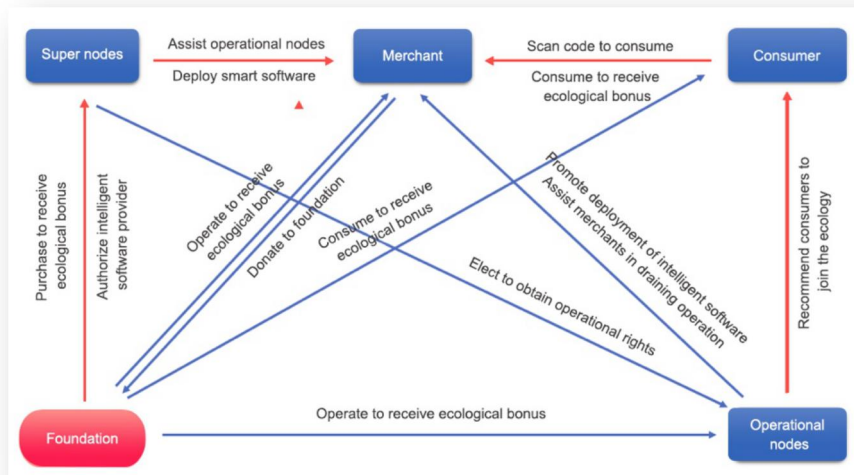# II .Business　Ecological Logic and Tokenomics

2.1 Ecological Logic

Figure 2-1: Ecological logic

BitCherry distributed e-commerce is committed to creating a super ecological network covering all aspects of daily life including clothes, food, accommodation and transportation, and it will create community ecological roles including users, merchants, super nodes, operation nodes and etc., connecting the online and offline O2O e-commerce system through behavior mining in the form of everyone participating and economy sharing token system. In order to ensure transaction stability, improve transaction efficiency and accelerate value flow, various types of value flow token are used for payment while the underlying blockchain technology and smart contracts are adopted as well.

2.2 Ecological Roles

Super nodes: Super node is the foundation software licensor, which can deploy

smart software and POS machines for merchants through the election of operation node, and obtain ecological token award related to this smart software /POS machine. Merchants donate some of their profits to the foundation, and the foundation rewards supernodes for their contributions and encourages them to contribute more to the community.

Merchants: Merchants join the platform, sign contracts with the platform based on the smart contract mechanism, take the smart software and POS machine as payment methods, enter the ecological circulation link, establish the internal settlement system based on the platform, and realize the highly efficient transaction and low cost settlement. Settled merchants can gain a great deal of user traffic from the platform. Thanks to the distributed style, communial attributes and rich rewarding mechanism, the platform will quickly attract a large amount of traffic and bring purchasing power to merchants. On the other hand, merchants can obtain token reward by actively promoting users to use smart software and POS machines. Merchants can get a dividend reward when their users consume in other merchants' shops in the ecology due to this promotion mechanism. At the same time, merchants can also get token rewards after achieving corresponding business performance.
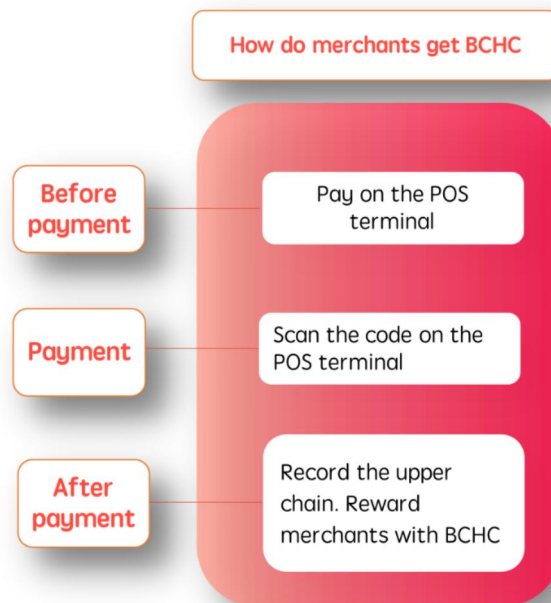
How do merchants get BCHC

Before payment — Pay on the POS terminal

Payment — Scan the code on the POS terminal

After payment — Record the upper chain. Reward merchants with BCHC

Figure 2-2: Merchants

Consumers: Cosumers may make purchase in all sorts of shops in the platform with cash payment or token. Each commodity will be priced in a combination of cash and token according to the terms of the smart contract. Consumers will get a certain number of token as a reward after code scanning and consumption completion, so as to realize token incentive trading, while stimulating more consumers to participate in the ecosystem of BitCherry.
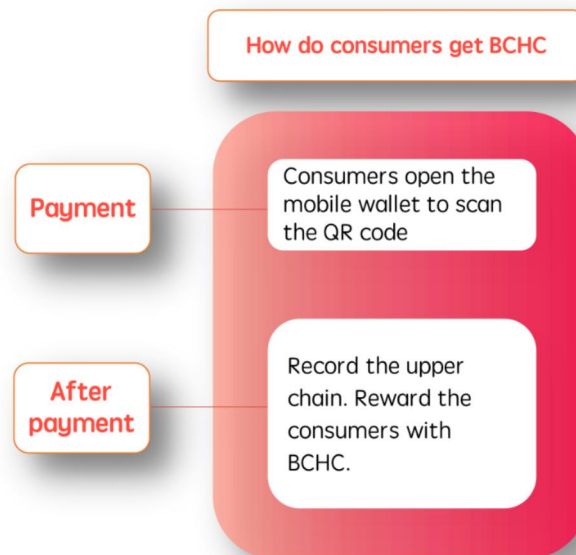
How do consumers get BCHC

Payment — Consumers open the mobile wallet to scan the QR code

After payment — Record the upper chain. Reward the consumers with BCHC.

Figure 2-3: Consumers

Operation nodes: BitCherry distributed e-commerce network will seek partners as operation nodes around the world. The responsibilities of these operation nodes on the platform include, but not limited to, promoting the platform to the outside world, enlarging the number of users in the ecosystem and linking up with merchants. The foundation provides operational support and ecological rewards to operation nodes. The operation nodes receives corresponding rewards through the performance in operation and the consequences of operations, greatly improving the enthusiasm of operation nodes and contributing to the prosperity and development of the ecological community.

Foundation: The platform built by the foundation uses the underlying blockchain ledger as the core part of the platform architecture, allowing users to trade freely, quickly and securely. The platform provides a wider sales channel for each merchant to help them attract more consumers.

Correspondingly, the platform charges the merchants certain amount for the transactions.

2.3 Token System and Value Circulation

BCHC (BitCherry Coin)

BCHC is for rewarding contributors to the platform ecosystem including consumers, merchants and operation nodes. This project is a distributed e-commerce network, which adopts the underlying technology of blockchain and its token attributes to issue a general token for the platform, which can be used to purchase platform commodities and pay to participants who have made contributions as reward. With the expansion of platform ecosystem, the demand for general token will continue to increase, and its value will also increase accordingly.

Tokens of Other Associations

BitCherry distributed e-commerce aims to create a decentralized and distributed e-commerce network to break the current dilemma of mutual separation and occluded pattern of e-commerce platforms. We actively set interfaces at the technical and organization levels, and we welcome other e-commerce and alliance projects to join us to create a borderless e-commerce network ecosystem where all participants can take advantage of the cluster effect to achieve value creation and sharing in an open and transparent ecological environment.

We will cooperate with other related industries and projects including O2O, group purchase, local activities, etc. while welcoming a wide range of projects to join the ecosystem and conduct technology and mechanism optimization design to make the tokens form a certain exchange mechanism with BitCherry token, so that consumers can use different tokens to consume at different merchants in the ecosystem, thus achieving the comprehensive circulation of various currencies within the ecosystem, creating more application scenarios for blockchain e-commerce, improving the value of each digital asset, expanding the scope of ecological coverage, and creating a truly borderless distributed e-commerce ecosystem.

III. Features of the Distributed E-commerce Network

Multiple payment methods: via traditional payment or platform token

When purchasing commodities and services in the mall of the platform, consumers can choose to pay by both platform token and traditional payment method. In this way, platform token can be used to deduct part of the amount, which increases the flexibility of payment methods and attracts more consumers to join. Comparing to other projects, the advantage of BitCherry is that both fiat money and platform token can be used simultaneously in its distributed e-commerce ecosystem, making the value of platform token match with fiat money, and maintaining the stability of its value and asset security to a certain extent.

Distributed Sharing Mechanism & Behavior Token Incentive

The platform has established a comprehensive sharing system, and each role in the platform can share the benefits from the operation of the platform. For example, consumers will actively share content to attract other consumers to the platform for consumption, and merchants already in the platform will encourage more merchants to join in. When more merchants and more consumers have joined, the sales of goods on the platform will also increase substantially, allowing platform participants to gain more. Each smart software /POS machine purchased by the super node is equivalent to purchasing a mining machine. As long as the consumption is generated, the revenue generated by the mining machine can be shared. For consumers, they will get a corresponding number of tokens for each consumption. Tokens can be used to exchange for commodities in the mall, or get rebates from merchants when accumulated tokens reach a certain amount. Merchants introduce consumers into the ecosystem continuously, so in addition to more sales profits, they can also get the consumption dividend of their consumers shopping with other sellers.

Distributed Open Platform with Access to a Wide Range of Industries and Communities

In the future, BitCherry distributed e-commerce network expects to have access to a wide range of business forms related to e-commerce in a variety of industries, thus building an open e-commerce ecosystem. The many other digital currencies entering the platform will be converted into BitCherry platform token under certain conversion rules and circulated within the ecosystem, which will promote the ecological development of the entire e-commerce industry.

Operation Nodes All Over the World

Global operation nodes are a critical component of the platform ecosystem. The platform evaluates different nodes based on factors including resources, influence, and operational status. Transaction verification, accounting

books, and operational performance for all nodes are recorded on the chain and broadcasted to the whole network for synchronization. If an operation node is unable to perform its duties, it will be replaced or delisted, and another operation node will be elected for substitution to create a truly autonomous, decentralized and distributed e-commerce ecosystem.

Decentralized Distributed Commercial Organization

The global operation nodes of the platform ecosystem is also a decentralized commercial organization. When a user wants to be a node of bill record, check node, payment node, logistics node, etc. by following BitCherry value agreement and using BitCherry application software, he/she may use platform token to recruit people who are willing to accept the platform token and create BitCherry value nodes together. When these nodes have not functioned after a set period of time, they will be disbanded automatically and the platform will then accept new node restructuring request. The relationship between the node and node is not subordinate but value transmission and coordination. These nodes also constitute an important part of BitCherry.

Community Self-communication and Ripple Effect

Every merchant in the platform has a unique smart software. Merchants can motivate their consumers to share smart software to attract more consumers to join the platform. Meanwhile, the platform also actively cooperates with other communities to recruit more platform operators, thus achieving fast platform expansion.

IV. Application Scenarios and Terminal

4.1 Application Scenarios

Purchase Online and Offline Commodities and Services

Any goods and services purchased by consumers on the platform will be settled uniformly using BCHC, and all transactions within the platform will be recorded on the chain, so that the foundation can reward each contributor within the ecosystem.

Advertising and Purchase of Marketing services

Merchants can pay BCHC for brand propagation, marketing promotion and advertising of the goods and services sold on the platform. The advertising slots of the platform mall will be sold through BCHC, providing convenient and effective means of propagation for the majority of merchants.

Data Purchase of Authorized Users

As a large number of users are gathered on the platform and sufficient behavioral data are accumulated, valuable commercial data products, such as users' consumption habits, can be obtained after modeling and analysis under the premise of gaining users' authorization. Merchants can pay for the right to use the data purchased with BCHC for their own business needs, laying a foundation for accurate advertising and improving the efficiency of advertising.

Purchase of digital goods

Consumers may also use BCHC to purchase digital goods on the platform, such as prepaid game coins, phone bills payment, domain names and virtual spaces.

Platform provides upstream and Downstream Enterprises Revenue Accounts

Refer to the management of accounts receivable and accounts payable of

upstream and downstream enterprises on this platform, commercial acceptance bills between enterprises and mobile bills. The enterprise issues mobile bills and use accounts receivable and accounts payable as value credit based on BCHC, forming insurance which can be divided, transferred, withdrawn and guaranteed in the upstream and downstream industrial chain, and can grant authorization and credit for value nodes in the platform according to the supply chain status in the upstream and downstream.

Payment and Settlement of Peripheral Service Providers

After the consumer purchases the goods, the merchant needs to deliver the purchased goods. At this time, the merchant can use BCHC to settle with the logistics service providers. Consumers can also choose and buy insurance for the commodities they purchased according to their own needs, or they can choose to use BCHC to pay the insurance cost.

Platform Service Business Credit and Transaction Security Insurance

When consumers purchase commodities, the platform can provide assurance and settlement of claims for customer's consumption behavior, business credit and product credit of product and service providers.

4.2 Terminal Application

Online Shopping Mall

The online shopping mall includes self-operated shops and other registered shops on the platform. Consumers can select products and place an order online. We also offer several delivery choices. Consumers can pick up in a nearby store, or choose merchants' delivery service. In addition, the online shopping mall also supports third-party delivery services.

O2O

O2O provides a series of services such as housekeeping, beauty/manicure, on-site laundry, on-site repair, etc. Consumers can place orders online, which greatly saves their time. Besides, consumers can also order travel

related services, such as booking train tickets, flight tickets, hotels and so on. The platform regularly updates various group purchase promotion information so that consumers can enjoy more high quality and cheap price services.

Digital Token Wallet

The platform wallet can be used for payment. Digital token and fiat money are both supported. Consumers can select their preferred payment method flexibly. Besides, the wallet also incorporates other functions, such as BitCoin Mining Calculator, mobile phone mining, digital assets management, red packet marketing, Bitcoin candy drop and so on. After consumers pay with the wallet, the reward points will be returned to their wallet. It is very convenient for consumers to manage their digital assets in the wallet. The integration of different functions in the wallet improves user experience and enhances user loyalty.

Intelligent Blockchain POS Machine with Hardware Wallet

By modifying the existing POS machines, we developed an intelligent blockchain POS machine based on hardware wallet with chip security level. The POS machine is installed in different registered stores mainly through supernodes. Every time when the consumer pays via scanning, the consumption records will be kept and all ecology participants of the platform will get corresponding dividend according to the smart contract. Hence, the POS machine is not only a media of payment, but also a 'mining machine' for supernodes to get rewards from the foundation.

The figure below shows the flow of payment via POS machine
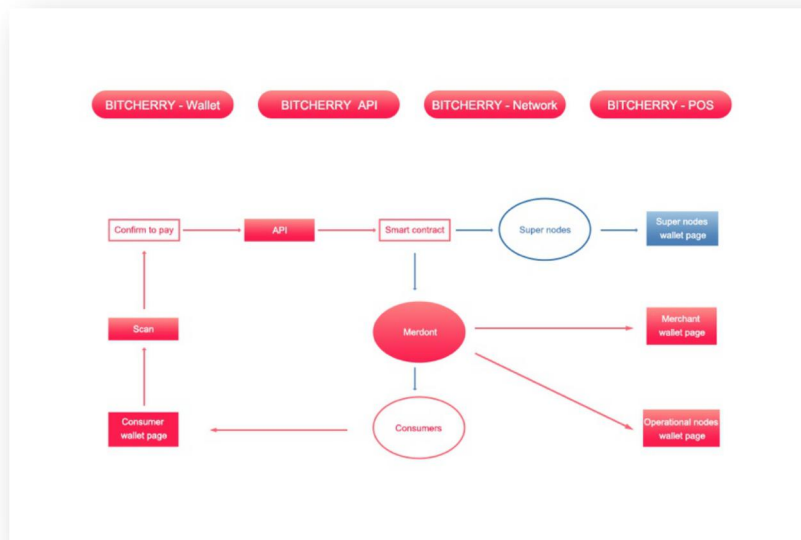
POS Machine Security Performance

Private key shall not be revealed

With financial level security chip protection, the private key will never be revealed from the hardware. Only the information with signature, instead the private key, shall be sent to computers. Even if the computer is monitored, the private key will not be revealed.

Resist hardware attack

The hardware is anti-fake and anti break-in. The entire circuit board has no weakness of non-secure chip, so it cannot be forcibly broken in or faked.

Double Factor Authentication

Double-factor authentication on PC and mobile phone guarantees that the wallet will be safe whether the mobile phone or PC is hacked.

Multi-currency Digital Wallet

The most reliable and safe method to save digital currencies, and it can also protect multiple encrypted digital currencies.

ERC20-Token Support

Support Ethereum ERC-20. All Ethereum ERC-20 Tokens are saved in the same

account and protected by the same technology.

Signature and Encryption with GPG

GPG is used to establish all files or emails

V. Prospect

The rapid development of mobile internet has ushered in an abrupt rise in mobile e-commerce market. At present, the post-80s and post-90s generations are the backbone force for mobile social network development, and the post-00 generation is a new force. Therefore, the e-commerce users scale will surely enlarge with young people's increasing usage rate of social network and mobile internet.

Statistics show that in the past 12 months, global social media users have increased by 6.5%. The Central Asia and South Asia see the highest growth rate, reaching 90% and 33% respectively. Among 7.6 billion global population, about 2/3 of them have mobile phones, over half of which are smart ones. So they can easily acquire internet surfing experience at any time and any where.
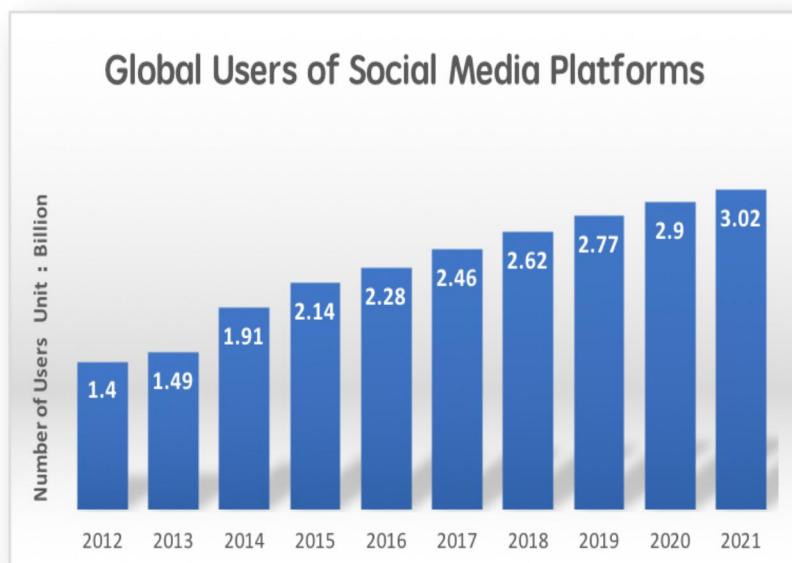

Figure 5-1: Global users of social media platforms

In 2018, the global e-commerce industry reached 28 trillion yuan, 23.4% higher than that in 2017. The recent years have seen a spurt of progress in e-commerce industry, the annual average compound growth rate of which reaching over 90% from 2014 to 2018.
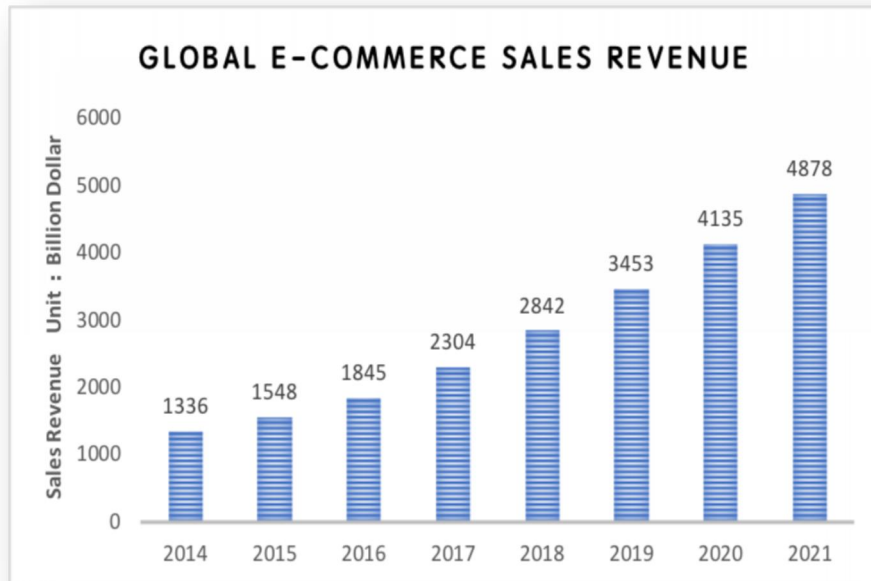
Figure 5-2: Global E-commerce sales revenue

Statistics show that compared with traditional e-commerce, distributed e-commerce can save 80.89% of fixed cost, relieve 73% of inventory pressure, and reduce 63% of marketing expenses, as well as improve 48% of sales cycle and 48% of sales profit.

The e-commerce mainly benefits its development from constant development of mobile internet and information technology. Meanwhile, the popularization of smart phones and extensive use of social apps make it possible for everyone to become a self-media center and interact with others in network structure and social form. Under such circumstances, a series of social communities, social network and other platforms have appeared, through which people are able to contact their families or friends via social media tools and also expand their interpersonal connections.

Mobile internet has nourished the development and spread of e-commerce and online social contact. The combination of social contact with e-commerce allows shopping information to be sent to people's fragmented network life through social channels. Users get shopping information through the relation chain of similar living backgrounds and aesthetic preference, realize shopping behaviors, and share their shopping experience via social

network, which leads to the interaction, attention and oral spreading among different social relationships. In this way, users feel a sense of identity and value, which in turn encourages their further shopping behaviors afterwards.

As the first distributed e-commerce network based on blockchain technology, BitCherry aims to build a super ecosystem that covers all basic necessities of our life. BitCherry relies on 'consumption = mining' mode to attract more consumers. The blockchain technology can effectively guarantee efficient, safe and transparent transactions, significantly strengthening the platform's competitiveness and helping attracting more stores to register. The investors, referrals and operators of the platform can acquire certain amount of rewards in various sales links, thus enhancing the cohesiveness of all participants on the platform. In addition, BitCherry will also actively seek communications and cooperation with other communities to form more nodes, expand its business coverage range, extend its application scenarios and achieve rapid and stable growth.

VI Technical Architecture
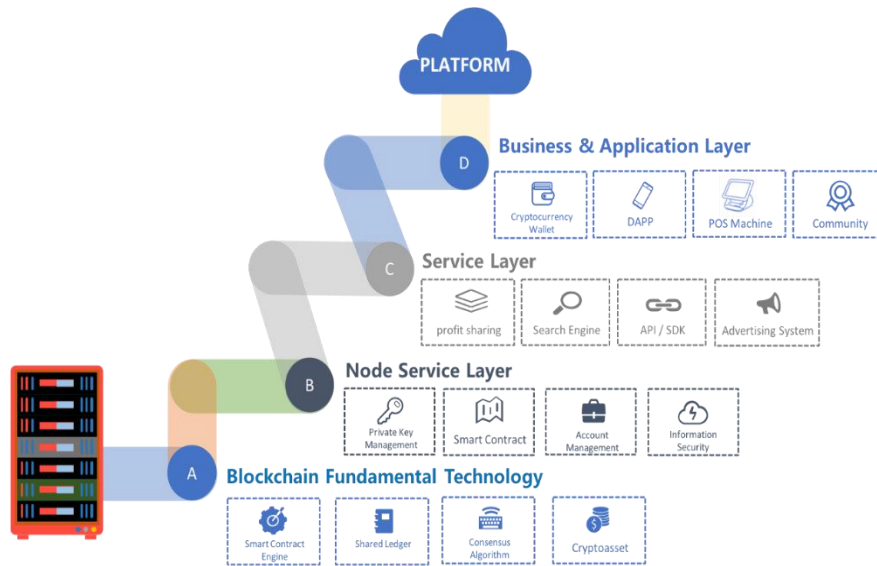
6.1 Architecture

Figure 6-1: Architecture

Fundamental technology:

Since the emergence of bitcoin in 2008, blockchain technology has made great progress in the past decade. It has gone through the blockchain 1.0 (programmable general certificate) era represented by bitcoin and the blockchain 2.0 (programmable finance) era represented by Ethereum.

Yet, while bitcoin has gained great success as a programmable crypto currency and ethereum has comparable success as the pioneering smart contract engine, but as a decentralized DApp platform, support is still far from serving different application needs, of which the most frsutrating is the TPS (transactions per seconds) that is only within one to two digits. In response to this situation, many so-called "blockchain 3.0" public chain projects has emerged. "Blockchain 3.0" refers to "programmable and organization of society", but now the distance between the vision both technically and stage of social development is very far away. As such, many in the industry simplified "blockchain 3.0" as providing higher TPS, having better governance mechanism, creating safer and more innovative functions in the smart contract blockchain platform compared to bitcoin and ethereum.

Differentiating platforms currently include EOS for its blockchain operating systems; Cardano (with strict mathematical proofs), Cosmos and Polkadot (mesh network), IOTA, Byteball, Hashgraph, Nano, etc that uses directed acyclic graph (DAG) data structure. At present, most of the so-called "blockchain 3.0" projects have not yet been implemented, such as EOS, IOTA, etc., and TPS is still in the hundreds to 3000 etc.

On the other hand, due to the limitations of the "blockchain impossible triangle" theory, most projects of "blockchain 3.0" only gain performance improvement at the expense of security and degree of decentralization. "Blockchain impossible triangle" refers to Decentralization, Security and Scalability having the tradeoff to get 2 out of the 3 factors. In particular, some so-called mega TPS blockchain projects, their actual underlying technology has deviated away from the decentralized design ideology of blockchain.

We believe that "blockchain 3.0", as it is called in the industry, is to be based on the original blockchain technology. And according to different situations, the degree of decentralization and security will be selected to different degrees, with the goal of improving TPS performance. In fact, the concept of "blockchain 3.0" is still at the technical level, which plays a limiting role in promoting the implementation of blockchain into actual business scenarios, and even less in promoting the society to move towards the vision of "programmable society and organization".

In view of this, we believe it is necessary to define a "blockchain 4.0" concept. "Blockchain 4.0" is essentially advancing from both the technical and business aspects. First of all, from the perspective of technology, "blockchain 4.0" will integrate the advantages of different blockchain technology platforms and combine with the traditional proven software engineering methodology to create a dedicated chain that is both flexible and deeply integrated with the application scenarios, rather than the current partial cross-chains. At the same time, the architecture of "blockchain 4.0" will be divided into two parts: one is the basic public chain platform that supports the underlying consensus, cryptography and smart contract, and the other is the protocol layer that provides various functions, including performance improvement, on the basic platform. Separating the protocol layer from the basic public chain improves the platform's flexibility for upgrading and extending.

In terms of business, "" blockchain 4.0 ""will be an industry vertical chain. Past experience has proved that the common public chain is difficult to be combined with application scenarios. Therefore, in the design of blockchain platform, especially the protocol layer, it is necessary to be deeply combined with the industry vertical to optimize correspondingly in application scenarios.

Under this concept, BitCherry will achieve the goal of "" blockchain 4.0" "in two stages considering the combination with e-commerce. In the first phase, BitCherry will provide an asset chain that enables the safe and efficient flow of cryptoasset in e-commerce. At this stage, BitCherry chain

will provide a 3000+TPS, compatible with ethereum smart contract public chain. The public chain will seamlessly support ethereum's wallets and exchanges, giving e-commerce companies a trusted platform to host cryptoasset. BitCherry's consensus mechanism will be an eos-like DPOS/BFT mechanism, consisting of 21 supernodes that will be bookkeeping nodes. The election of super nodes will be carried out among participants of BitCherry e-commerce community. The 21 nodes with the highest number of votes will become super nodes, and the other 21 nodes will become backup nodes according to the number of votes. The following figure shows the architecture of BitCherry in the first stage.
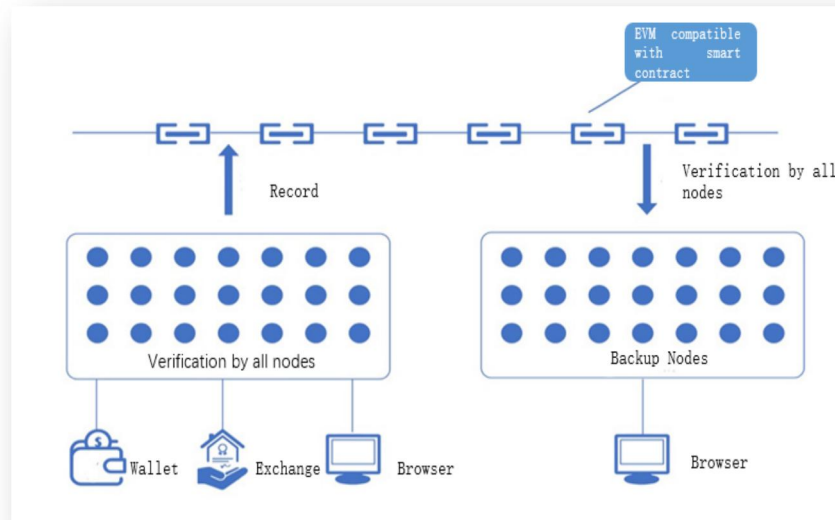

Figure 6-2: Bitcherry ecommerce-first

In the second stage, BitCherry will provide a massive public chain environment supporting e-commerce ecology —— e-commerce vertical blockchain network platform. This public chain will support the entire ecommerce ecosystem, empowering ecommerce business operators to quickly transform into digital operations in the era of digital economy transition. BitCherry public chain provides a credible environment, allowing fair, real time distribution of the interests between the participants in its ecosystem including consumers, store, operating platform, digital rights owners, recommenders. At the same time, on the public chain, there will be multiple e-commerce operators issuing their own tokens, and there will be multiple exchanges on the public chain, so that the tokens of each e-commerce platform can be exchanged according to the market mechanism, creating value exchange flow in the ecosystem. At the same time, the public chain environment also provides a fair governance structure, including a complaint mechanism based on smart contracts, credit score, arbitration mechanism etc., to prevent fraud and damage to the interests of consumers and investors in digital assets. These ensure the compliance and healthy development of e-commerce ecosystem.

In terms of technology, BitCherry public chain will provide a mesh network system combining blockchain and DAG technology. The main chain will provide

security for the whole system. In the main chain, block data structure and POS/POW are adopted to ensure the safety of the main chain to the greatest extent and prevent 51% of computing power attacks. Meanwhile, fair mining opportunities are provided to miners in the public chain. E-commerce operators can set up their own e-commerce system in the environment of BitCherry public chain. They can support a specific application scenario with each sub-chain and independently issue cryptoassets on each sub-chain. The sub-chain is mainly based on DAG design to improve the transaction concurrency, so that the TPS on each sub-chain can reach 10000+, so that the TPS of the whole BitCherry public chain can easily reach millions. In addition, the main chain security is used to ensure the security of DAG subchain. Smart contracts are supported on subchains. The smart contract engine will provide turing-complete engines that support multiple languages. The whole BitCherry public chain will adopt BCHC as the unit of "Gas" to prevent the security problems caused by Turing's completeness.

BitCherry will provide agreements on public chain platform, including account management, rebate and account sharing, cross-link and asset management, as well as a development environment for secondary developers to develop more business-related agreements and DApps on the platform.

The figure below is the architecture of BitCherry public chain in the second stage.
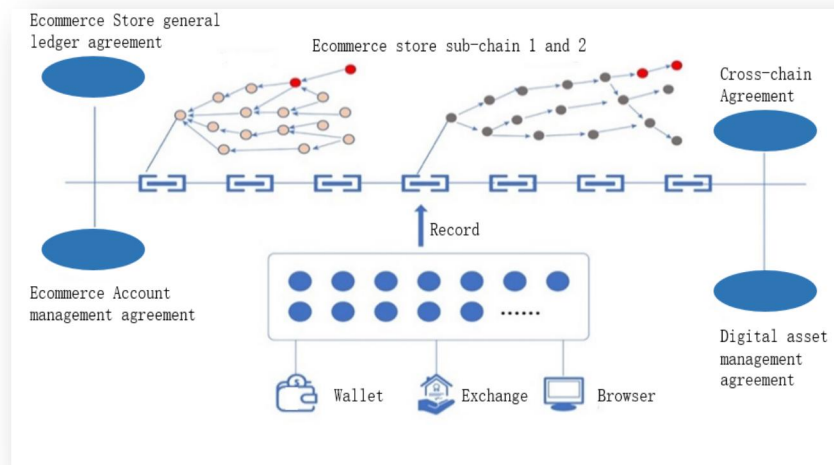
Figure 6-3: BitCherry public chain architecture

BitCherry public chain is supported by fundamental technologies such as smart contract, distributed storage, and consensus algorithms to create structured data for each dimension of cryptocurrency. With smart contract algorithm mechanism, it is able to solve the data storage security issue, make the data and transactions generated by the platform traceable and tamper free, and ensure strong consistency of the underlying data while resisting influence from malicious behaviors.

Node service layer:
It mainly consists of private key management, smart contract, account

management, and information security. It completes account authentication, authorization, and smart contract mechanism and solves corresponding problems given blockchain features of tamper free and traceable.

Service layer:

Service layer mainly consists of API, information recommendation engine, search engine, and advertising system; API is open through the interface to cooperates with all parties, enhancing the ecological effect of BitCherry distributed ecommerce platform, and reducing the threshold of DAPP development; based on the decentralized data storage structure, it greatly enhances the implementation of information retrieval and advertisement delivery services;

Application layer:

It consists of encrypted digital wallets, BitCherry distributed ecommerce platform DAPP, POS machines, O2O online mall and online communities.

6.2 Technical Features

BitCherry distributed ecommerce network structure is based on a series of technologies such as signature algorithm, distributed storage, data operation, consensus mechanism, information dissemination and so on. The decentralized and tamper-proof structure enables different participants of BitCherry's ecosystem to establish an trust mechanism and realize fast transaction verification in seconds.

This project will issue BCHC, and all transactions on the platform will be settled using BCHC. All transactions on the platform will be recorded on the chain, so that the foundation can reward each contributor within the ecosystem. The smart contract on BitCherry distributed ecommerce network ensures that all transactions are fair. As long as the conditions are met, the smart contract will be automatically triggered for execution without human intervention. The rules and regulations in the smart contract are completely transparent and fair. The block chain features a traceable system where the underlying technology sources, the directions and relevant responsibilities can be investigated, which can solve possible transaction disputes during BitCherry distributed ecommerce platform operation.

BitCherry distributed ecommerce network contains enormous data source. In

order to maintain data conformity and avoid the Byzantine Generals Problem, some specific links can only be executed in series instead of in parallel. The distributed shared ledger technology of BitCherry distributed ecommerce network relies on its distributed consensus instead of distributed concurrent processing, greatly increasing the transaction data throughout. For data privacy, the most sensitive issue on commercial market, BitCherry distributed ecommerce network provides multiple privacy protection functions. Firstly, the underlying block chain supports homomorphic encryption where all data can be stored encrypted and only visible to the users themselves. Secondly, BitCherry distributed ecommerce network offers encryption plug-in services where users can choose corresponding plug-ins according to their demands and the application also support encryption treatment during data entry.

6.3 BitCherry cross-chain technology ideology and hybrid system architecture
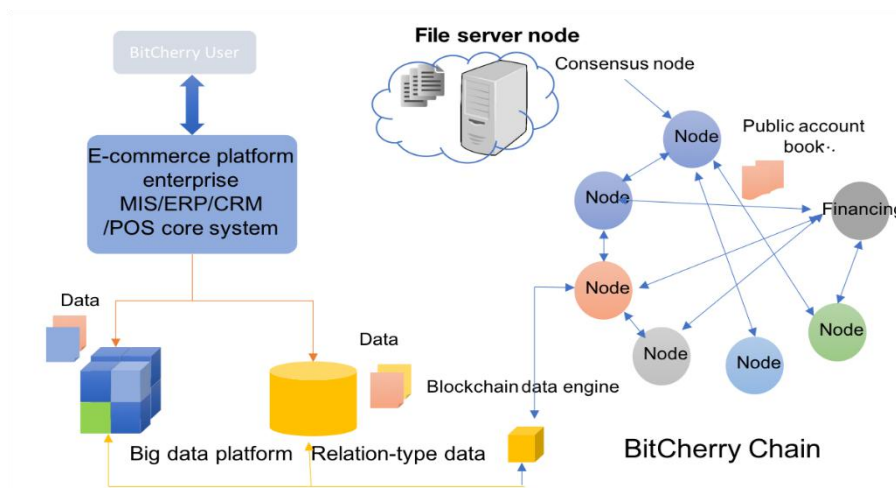
Figure 6-4: BitCherry distributed e-commerce platform hybrid technology architecture reference diagram

BitCherry connects to both big data engine and traditional relational database engine and cluster, and introduces the concept of blockchain data engine while solving the problem of high availability and high scalability:

The data in the traditional big data relational database can be synchronized to the block chain in real time in an asynchronous way

The blockchain data engine can add, modify, delete and verify the asynchronous value according to the open API of different public chains, so as to realize asynchronous cross-chain among heterogeneous chains.

VII Governance Structure

7.1 Foundation governance structure:

The strategic decision committee of the foundation shall be established to exercise its decision-making authority and organize the discussion of major issues.

The functional units and corresponding functional committees of various departments including project research and development, market and operation of BitCherry distributed e-commerce platform to be established. The functional committees are to be regularly organizing meetings and issuing important opinions. The specific implementation of the functional units ensures the effective decision-making.

To promote the progress of sharing economy on the Blockchain, BitCherry advocates the close integration of technology and business, accelerating the project, achieving business revenues. At the same time, giving back to the foundation and furthering promotion of the foundation and BitCherry platform.

Adhering to the principles of transparency and fairness, BitCherry distributed e-commerce platform foundation will set up a discipline inspection channel, and all parties of the ecosystem are welcomed to participate in the supervision and operation. After the fundraising, the foundation will disclose the latest progress of the project through regular reports and ad hoc news releases. The use of the funds raised will also be formally audited by a third-party audit institution, and the whereabouts and use of the funds will be disclosed in a transparent manner.

7.2 Organization Structure of BitCherry Foundation

The foundation structure takes references from the traditional models, combining professional committee member and functional departments, setting up strategic decision committee and functional unit committee corresponding for the daily operations and unique situations on the BitCherry distributed ecommerce plaform.

In the initial period, to launch the Project rapidly and smoothly, the first Decision-making Committee will comprise team members and representatives of early investors. After a term of 2 years, committee members will be re-elected through voting by the members of the foundation.

VIII Team

8.1 Core Team

Paul
Founder & CEO of BitCherry
Founder of One-Belt-One-Road
Blockchain Foundation
Senior Blockchain Compliance Expert
Singapore

Bob Qin
Chief Scientist of BitCherry
Chairman of North America Blockchain Foundation
Blockchain underlying technology geek, Former Core Researcher of IMB Toronto Research Centre DB2 Data Base, Senior Big Data Expert
Canada

Kilian Hussmann
Co-Founder
and COO of BitCherry
Germany

8.2 Advisors Team

Kim Kuen-Young
Early Investor and Advisor
Chairman of WTIA, Senior Advisor of Al Hermas Global, Chairman of Al Hermas Korea, Special Ambassador of Tunisian Economy City
Korea

Dr. Riadh K. Toukabri
Early Investor and Advisor
Chairman of Saudi Arabia
Real Estate Company
Saudi Arabia

John Mavrak
Early Investor and Advisor
Former President of the World Trade Center (New York)
President of the Global Hotel Alliance
USA

Jay Liang
Advisor
Founder and Co-Chair of Hong Kong Blockchain Association (HKBA)
Founder of Orient ES Capital Group
Hong Kong

Dr. Anatoly Klepov
CEO of Mobile Trust Telecommunications (MTT)
Russia

William Chen
Advisor
Founder of Tiantian Douliao
Director of Distributed Economy Management Office
China

IX Token Issuance Plan

9.1 BCHC Issuances

The total number of tokens is 10 billion with a guaranteed no-addition, token

distribution and lock-up period are as follows:

Allocation	Proportion	Details
Consumption incentive	35%	Consumers will be rewarded through behaviors such as transactions and purchase
Ecosystem building	40%	Reward merchants, community operation, super node, operation node, legal compliance to join
Founding team	15%	Reward early stage team contribution and for emergeny purpose. It will be unlocked in 3 years releasing 1/12 per quarter
Foundation	10%	Foundation operations. It will be unlocked every six months. The amount of each unlocking does not exceed 10% of remaining amount of the held coins.

Figure 9-1: Allocation Details Plan

X Project Schedule

BitCherry distributed ecommerce network one-year product development goal is divided into three stages:

The first stage: Achieve BitCherry-POS fiat payment channel, BitCherry-wallet mini applications advertising reward application for merchants cross-exchange

The second stage: Achieve BitCherry-POS token payment channel, BitCherry-Wallet mobile Dapp multi-scenario advertising reward application;

The third stage: Achieve BitCherry-POS offline token payment and over-the-counter transaction settlement standards

Q4　2019
Cherry Network go live ;
Cherry-POS Fiat payment;
Cherry-wallet mini application simple advertising usage

Q1　2020
Cherry-POS Token Payment;
Cherry-Wallet Dapp Multi-scenario usage

Q2　2020
Achieve Cherry-POS Token and OTC settlement standards

Figure 10-1: Schedule Plan

First Stage

Expand brick-and-mortar retailers in China, Singapore and O2O Service provider.

600,000 Merchants

10,000,000 Users

Second Stage

Expand brick-and-mortar retailers in Asia Pacific and O2O Service provider.

2,000,000 Merchants

100,000,000 Users

Third Stage

Expand other emerging markets, Such as India, South America and deepen main markets.

5,000,000 Merchants

500,000,000 Users

Jan – Jun 2019

Jul 2019 – Jul 2020

Jul 2020 onwards
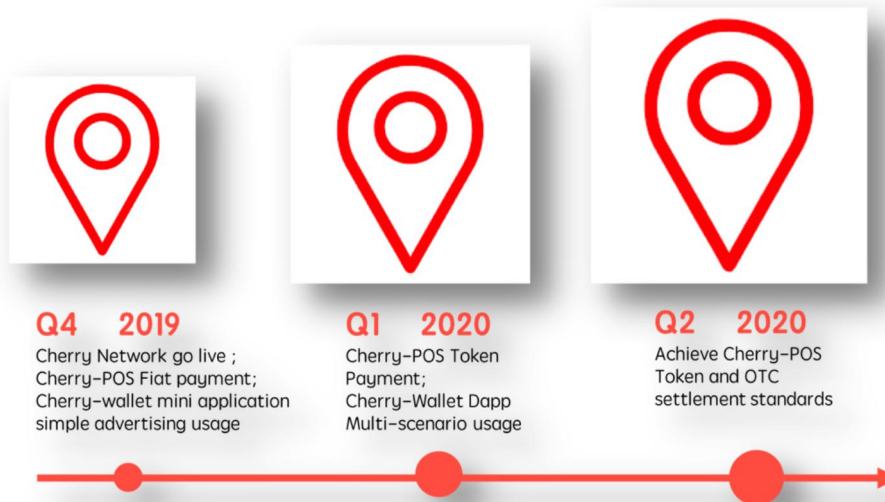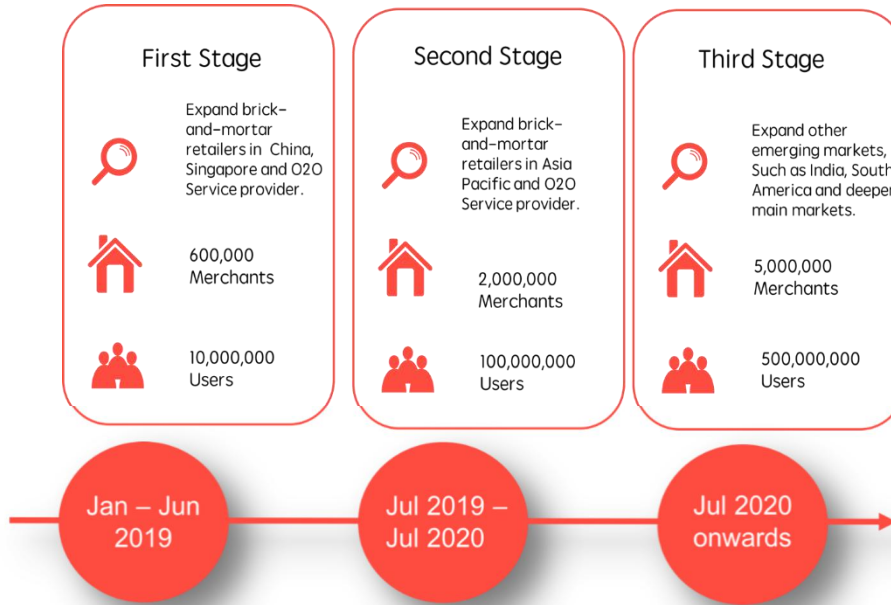
Figure 10-2: Expansion Plan

XI Risk Disclosure

This Project may involve the following risk profile with investors should consider:

Compliance and operational risks

Compliance and operational risks refer to risks that may result in termination of the BitCherry distributed ecommerce business in host countries due to violation of local laws and regulations during fundraising and business operation.

Countermeasures taken by the Operation Team:

- The Operation Team and Decision-making Committee will be operated in a distributed manner to eliminate risks in a single location;
- Local lawyers will be consulted during business development, to help to design the issuance of token, token trading, blockchain finances, blockchain applications and other businesses under local legal requirements.

Market risks

Market risks occur when the BitCherry distributed ecommerce network is not accepted by the market or fails to attract enough users, which results in stagnant business and insufficient profits for further operation.

Countermeasures taken by the Operation Team:

- Confirm potential market weaknesses through market surveys carried out over the past year
- Share BitCherry distributed ecommerce network concepts and ideas with the industry, learn from previous experience regarding similar products, optimize and improve BitCherry distributed ecommerce network;
- Rapidly incubate the ecosystem and start generating benefits by applying the founding team's experience in property and travel industry

Technical risks

Technical risks refer to material fault in the underlying technologies that hinder the expected functions of the BitCherry distributed ecommerce network, as well as tampering and loss of key data.

Countermeasures taken by the Operation Team:

- Develop the BitCherry distributed ecommerce network by applying a framework that has been recognized and approved by commercial customers for mature, open-source and secure blockchain technologies;
- The Project Team will recruit more talents after raising enough resources, so to lay solid foundation, seek improvement and learn from mature experience in development.

Capital risks

Capital risks refer to significant capital loss in the Project, such as capital being stolen, capital loss, substantial devaluation of funds, etc.

Countermeasures taken by the Operation Team:

- The capital reserve will be controlled and ined jointly by the Decision-making Committee with multi-signature wallet and 'cold storage'. Under the multi-signature model involving 5-7 directors, capital reserve will only be under risk when 3 directors cannot fulfill their responsibilities at the same time;
- With years of service in the financial industry, the Operation Team has accumulated rich experience in risk control. Capital loss may only occur when there is drastic price fluctuation (price drop of over 50%) for the working capital.

XII Disclaimer

This document is for informational purposes only, with its content serves only as reference and does not constitute the provision of opinion on the trading of BCHC, nor any advice, solicitation or an offer by BitCherry distributed ecommerce network or any relevant companies for the purchase and sale of any shares or securities. This document is not part of and should not be understood as any trading behaviors, and is not agreement or commitment in any forms.

Any targets mentioned herein are subject to change considering all the unforeseeable circumstances. Notwithstanding all efforts made by the team to achieve all the goals contained herein, individuals and groups purchasing BCHC shall assume the risks related thereto by themselves. Some contents contained herein may be updated correspondingly in new white paper as the Project progresses, and updated contents will be disclosed by public announcement on the official website or in new white paper.

BitCherry distributed ecommerce network expressly disclaims any liability for any direct or indirect loss arising from:

• Reliance on any content contained herein;
• Any incorrect, missing or inaccurate information contained herein; and
• Any behaviors resulted therefrom.

Not with standing all efforts made by the team to achieve all the goals contained herein, we cannot guarantee successful fulfillment of such targets considering all force majeure events.

BCHC is an instrument issued by the BitCherry distributed ecommerce network, rather than an investment option or a kind of ownership or control right. Control over BCHC does not assume the ownership of the BitCherry distributed ecommerce network or any applications thereon. BitCherry does not grant any person any right to participate in or control over any decisions made

for BitCherry distributed ecommerce network or any applications thereon.

BCHC is a kind of token with the BitCherry distributed ecommerce network as one of its many applications. We cannot guarantee its appreciation in the future, and it may devalue in certain circumstances.

To the maximum extent allowed by law, in no event will we be liable for any damages or risks arising from the participation, including but not limited to any direct or indirect personal damage, loss of business interests, loss of business information, or any other economic losses.

The BitCherry distributed ecommerce network has expressly disclosed the possible risks to all participants. Once participants participate in BCHC's public offering, it is deemed that participants have understood and agreed with all the clauses contained in the detailed terms, and have accepted the potential risks of the platform, with all consequences resulted there from by themselves.