Ifoods chain

# Make shared eco for global food test

## White paper

**IFOODS CHAIN FOUNDATION LTD.**

**www.ifoodschain.io**

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Contents

## Abstract

It is a valuable strategy to make a test platform for food quality and safety, and it relates with national economy and people's livelihood. At present, the effective eco consisted of consumer, experts, enterprises, and organizations etc has not been established for food quality and safety. Supply-side is lack of channels for reliable tested data transmission, consumption-side is lack of convenient and safe food quality and safety test methodologies, methods and knowledge. The traditional centered test methods, with disadvantages of high cost, time-consuming, cannot meet the consumers' requirements of rapid and instant tests. We express a desire and put forward a proposal to make a shared test platform for food quality and safety.

Ifoods chain is a public chain that bases on block chain technology to make a safe, reliable, shared distributive food quality and safety test. The profit of consumers, inspection officer and inspector is protected by smart contract. Food test smart device and dynamic ARP inspection (DAI) technique enable the consumers test food quality and safety rapidly. Multi-party is attracted to participate in the eco using excitation mechanism and shared block chain technique. Block chain existing evidence and distributed storage technique guarantee the safety and querying of the trade information. The development of decentralized application (DAPP) and smart device realize the multi-distributive mode application of all technology areas in food quality and safety.

The public chain system requirement is met by the design of the white paper. The public chain system of Ifoods chain realizes many applications including smart device food test and dagger, distributed food test data value delivery and protection, distributed food test network, distributed eco maintenance and administration, and distributed e-commerce network etc.

# Glossary

**IFOOD**：IFOOD is the digital coin of the de-centralized eco.

Food test smart device: Food test smart device is a distributed device that bases on reliable food data model to collect samples being tested, and upload the data of food test and location, and simultaneously daggering.

Super probe system: Super probe system, developed by Ifoods chain and focused on mature application of meat test, headed to consumer, enterprises and supervises and can rapidly and instantly obtain food quality and safety information, is a kind of smart device of food test.

Distributed data value protection and transmission: Ifoods chain's eco data is self-owned, which participants' data are absolutely confidential and the data for trade can be done safely and reliably.

Distributed food test network: Participants in Ifoods chain eco are the massive distributed device owners.

Distributed eco maintenance and administration: Ifoods chain eco includes the profit of the participants such as trade matching, community voting etc.

**Distributed ecommerce network:**

In Ifoods chain, the access to market needs community voting for medium to high quality food distributed sales network, which is different with traditional sales network.

**USP system**：USP（universal service platform） system is a mediated element of the Ifoods chain block chain. USP system will be reserved for front-end application of open API interface and SDK for different users.

**DAI**：Distributed Artificial Intelligence (DAI) is a combination of the artificial intelligent and distributed calculation.

**OBFT:** OBFT is a sort of algorithm that is improved having super nodes, 1/3 error tolerant rate and better consensus efficiency.

# Ⅰ. Ifoods chain desire and mission

Ifoods chain desire：

Make global food test shared eco

Ifoods chain global mission：

Ifoods chain public chain is developed basing on block chain technology, smart contract, DAI, smart devices and other technologies. Ifoods chain provides consumers with the means to quickly detect food safety and quality data, protect the rights and interests of food testing experts, and promote the development of food safety.

# Ⅱ. Food safety test eco background

## 2.1 Food safety test market scale analysis

According to the global food market data issued by the GlobalData in July 2017, the Chinese food market ranked first in the US $1 trillion and 173 billion 900 million, while the United States ranked 1 trillion and 166 billion 300 million in second. Japan, Germany and Britain also rank among the top five, but the scale is only $23 billion, far from China and the United States. The total global food market is US $6 trillion and 317 billion 600 million and is expected to grow to US $7 trillion and 735 billion in 2020. In the 2015 regional ranking, Europe topped the list of US $2 trillion and 126 billion 800 million, followed by Asia Pacific with us $2 trillion and 123 billion, followed by North America, Latin America and the Middle East. The industry believes that with the growth of China's economy, the Asia Pacific region surpassed Europe last year and became the world's largest food market.

The growth of food market drives the development of food safety testing market. According to the survey, 59.3% of respondents were most concerned about the relevant test certificate when choosing food. In contrast, price, brand, production, processing and appearance are not very highly concerned.

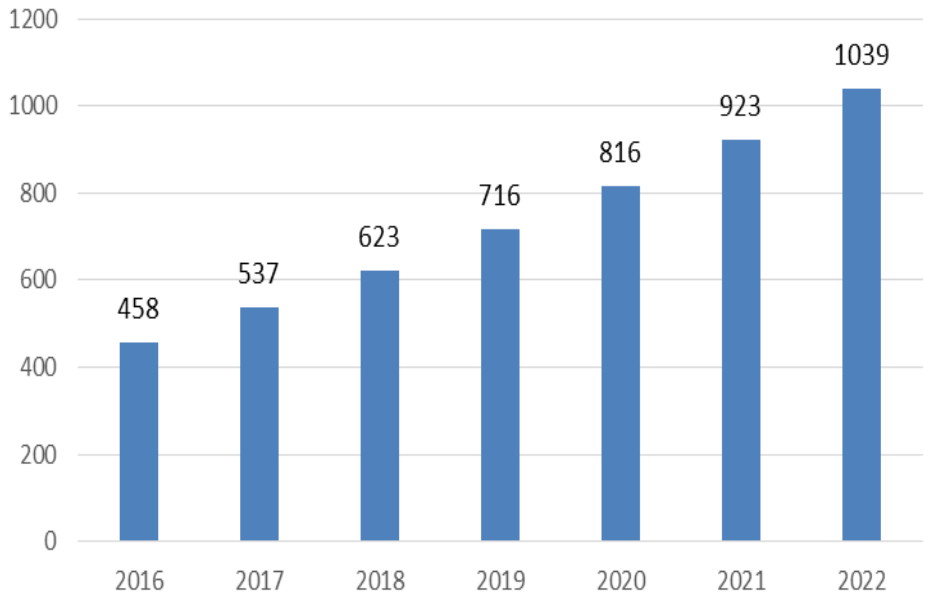



**Fig 2.1 2016-2022 China food safety test market prediction （Hundreds millions yuan）**

According to the year of 2018-2023 analysis report on the development prospects and investment opportunities of China's food safety test industry, the demand for fast food safety test will be increased by more than 15% in the next few years. It is estimated that by 2022, the market scale of domestic food safety testing industry will exceed 100 billion yuan.

## 2.2 High quality food safety market demand

### Meat market demand

Taking beef as an example, the import of beef in China increased from 16 thousand tons in 2000 to 700 thousand tons in 2016 (a steep increase in 2013, up to 4 times the same year period), while the export volume fell from 47 thousand tons to 25 thousand tons in the same period. The rise of beef price and the reverse change of beef import and export further confirm that China's beef cattle industry is in short supply and the industry space is vast.

At present, the per capita consumption of beef in China is about 5kg, accounting for only 1/2 of the world mean and 40% of the Asian mean. Assuming that the per capita consumption of beef in our country reaches the world average of 10kg, the total consumption is close to 15 million tons, and the beef consumption market in our country is expected to reach 900 billion yuan in the future.


**Fig 2.2 Import and export volume of China in 2000-2016 years**

## Organic food market analysis

The report "Organic Foods And Beverages Market Analysis By Product, Organic Beverages, And Segment Forecasts, 2014-2025" shows that by 2025, the global organic food and beverage market is expected to reach US$320.5 billion, much higher than the US$77.4 billion in 2015. . Fruits and vegetables dominate the global organic food market, accounting for more than 37% of market revenue in 2015. It is predicted that by 2025, the organic fruits and vegetables market is expected to earn more than 110 billion US dollars.

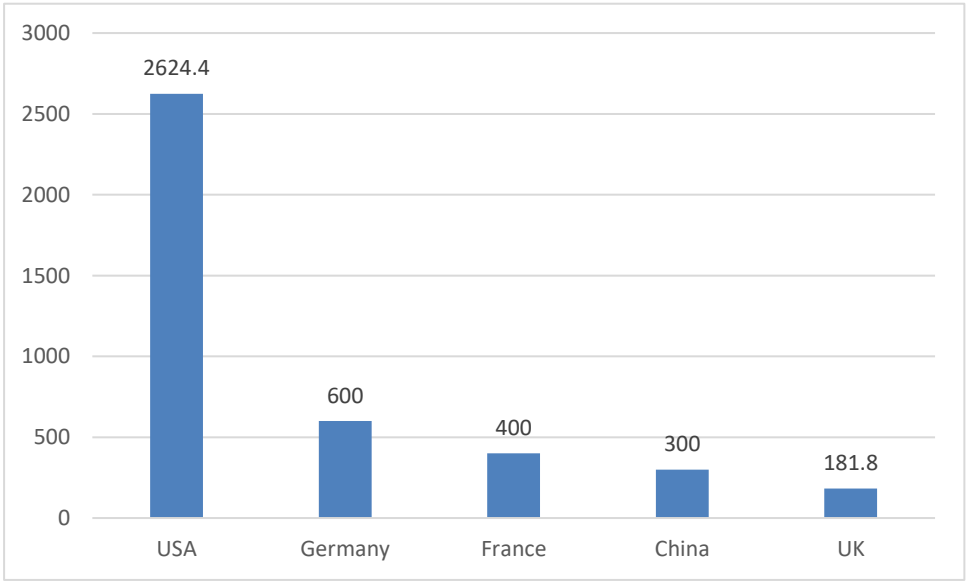



**Fig 2.3 organic food sales in main global countries in 2015（Hundreds millions yuan）**

In addition, consumers' consumption of organic meat and poultry products is also increasing, and this segment of the market is pushing ahead in the development of the entire market. During the forecast period, the compound annual growth rate (CAGR) of sales of organic meat and poultry products is expected to reach 13%.

In 2015, organic food sales in the United States reached 262.44 billion yuan. Europe is the second largest organic food consumer market except the United States.

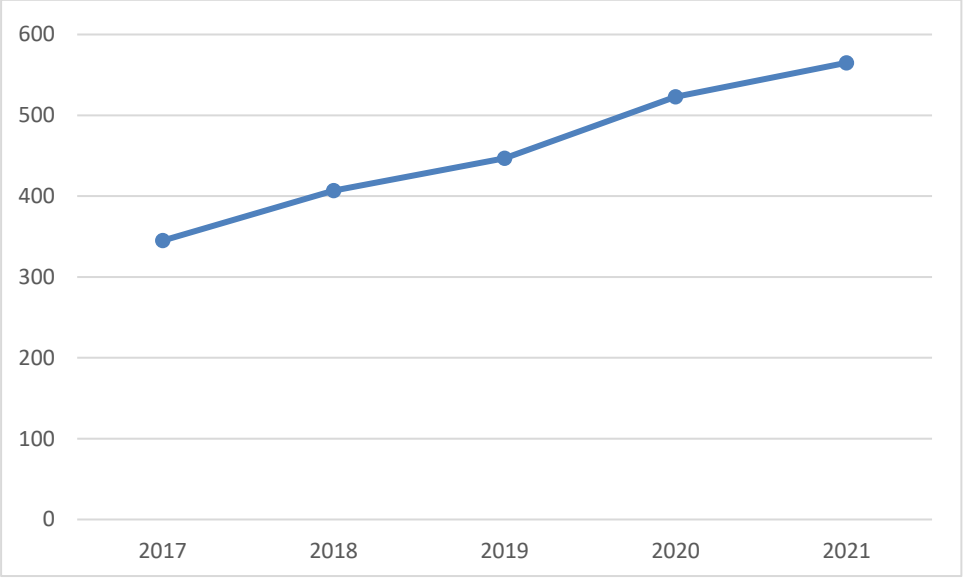



**Fig 2.4 China organic foods sales in 2017-2021（Hundreds millions yuan）**

American organic food market share accounts for 90% of the world's total. According to the "Organic survey" conducted by the International Organic Market Research Organization, Germany and France are the countries with the highest organic food sales in Europe. In 2015, they were nearly 60 billion yuan and 40 billion yuan respectively. Britain ranked third, with sales of 18.18 billion yuan. The broad market space for international organic food provides an extremely favorable external environment for the development of China's organic food industry.

The "Investment Analysis and Forecast Report of China's Organic Food Market in 2017-2021" released by the China Investment Advisor predicts that China's organic food sales will reach 34.5 billion yuan in 2017, and the average annual compound growth rate for the next five years (2017-2021) will be approximately 13.17%, sales in 2021 will reach 56.5 billion yuan. According to the data of the Organic Trade Organization (OTA), sales of organic food and beverages in China will increase by 15.9% from 2015 to 2020.

## High demand for food safety and quality test

According to research data, the scale of demand for food safety testing instruments in China reached more than 30 billion yuan in 2013, and the growth rate has been maintained at more than 30% in recent years. From a digital perspective, there are 24,847 inspection agencies in the country for agricultural systems, quality inspection, food and medicine, and health care systems. In 2013, the agricultural system alone had a total of 3.1 million law enforcement personnel deployed throughout the year, 621 new testing institutions and laboratories were newly added, and inspection agencies nationwide issued 85 million test reports on food and agricultural products, and the annual market for testing instruments. 100 billion yuan in scale. Under such a scale, food safety is still not perfect, and it is expected that by 2020, the total number of laboratory and fast-check equipment and consumables plus third-party testing will reach more than one trillion yuan.

## 2.3 Pain points in food safety and quality test

## Supply-side pain points

On the supply side of the food safety quality inspection market there is a lack of trust and channel pain points. The food inspection expert detection data analysis service relies on a third-party centralized system, and there is no channel and way of trust to deal directly with the tester and demander. At the same time, relying on a third-party centralized system makes the food inspection expert's data model easy to leak, and the intellectual property rights of the detection expert cannot be well protected.

## Consumption-side pain points

There is a lack of methods, means, and knowledge in the consumer side of the food safety and quality testing market. In terms of food safety quality testing methods, sample testing methods on the market are costly, time-consuming, and food safety detection

thresholds high. It is difficult for traditional methods to meet the needs of researchers, ordinary citizens, and businesses to quickly and cost-effectively detect food safety.

## Lack of convenient, low-cost testing method

The food inspection methods in the market are costly and time-consuming, and the food safety inspection threshold is high. Traditional means cannot meet the needs of ordinary citizens and businesses to quickly and cost-effectively detect food safety. In the traditional process of meat detection, the process of sample selection, instrument detection, and results analysis are complex and cannot meet the needs of end consumers.

## Safe testing of intellectual property is difficult to protect

In the traditional centralized detection method, the detection expert provides a third-party central organization of the detection data model. Food science and technology intellectual property lacks effective protection measures, and expert knowledge data models are easily leaked and stolen.

## Insufficient food related knowledge of consumer

Food data is in the hands of suppliers, testing departments, and businesses. Consumers often do not get the data they really need. At the same time, due to the lack of relevant knowledge, consumers and businesses face food-related data provided by the regulatory authorities. On the one hand, it is difficult to judge the merits of food, and on the other hand, there is no intuitive understanding of the test data.

# Ⅲ. Ifoods chain eco model

The Ifoods chain ecology is a distributed food safety quality inspection ecology based on blockchain. In the Ifoods chain, testing experts, testers, regulators, food companies, businesses, and consumers participate in ecology. Ifoods chain is based on technologies such as blockchain technology, smart contracts, DAI, and food detection smart devices to protect the interests of participants while satisfying the need for rapid and instant detection of food by testers, meeting the needs reflected by the value of food inspection experts' knowledge, meeting the needs of companies, The need for rapid testing, data linking, etc. Ifoods chain provides consumers with a means to quickly test food safety quality data, protect the rights of food inspection experts, and promote the development of food safety. The Ifoods chain ecological model is shown in Figure 3.1.

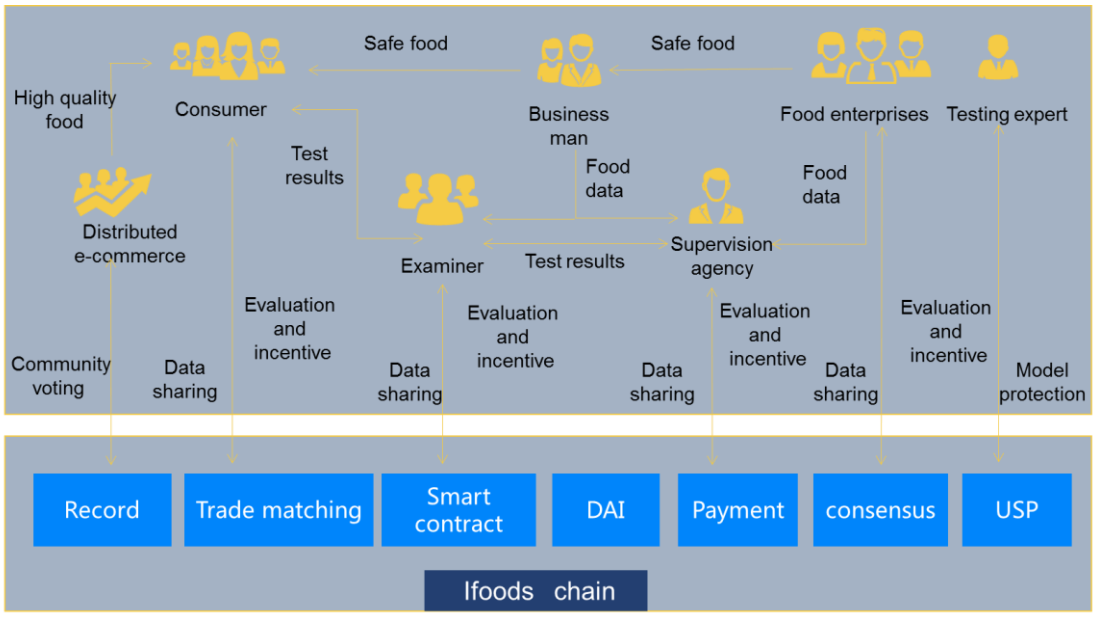



**Fig 3.1 Ifoods chain eco model**

## Testing experts

In the Ifoods chain ecosystem, testing experts in food, meat, vegetables, food, water, and oil fields provide reliable food data analysis models. (Ifoodschain determines the reliability and feasibility of testing experts to provide food data analysis models through community voting and intelligent data analysis models)

### Examiner

In the Ifoods chain ecosystem, the examiner is an ecological participant who uses food detection smart devices for food data extraction and selects food model libraries for distributed food testing.

### Supervision department

In the Ifoods chain eco, the supervision department uses food test smart devices to analyze food data rapidly and instantly, and improves test efficiency and administrative efficiency.

### Food enterprises and business men

In Ifoods chain eco, food enterprises and business men can reduce food test cost by using food test smart device to analyze food data rapidly and instantly.

### Distributed e-commerce

In Ifoods chain eco, high quality food enterprises selected by the mode of community voting will become the participants of the distributed suppliers.

### Consumers

In the Ifoods chain ecosystem, the buyers of safe food and the purchasers of testing data. Consumers can be detects, and detects can also be consumers.

# IV. Ifoods chain application scenarios

Ifoods chain will develop a variety of DAPP applications including smart device food test, daggering, distributed data value delivery, protection, distributed food test network, distributed eco maintenance and administration and distributed e-commerce etc.

## 4.1 Intelligent food testing device and Mining (awards)

### Smart food testing device

Block chain account book cannot be tempered with, on which multi-party maintain the account book together. Smart devices are based on the block chain, which guarantees real-time, orderly and forgery of the uploaded data. Meanwhile, the collected data of smart

device is owned by the user, which can be shared and be saled for awards. A massive shared data enables every food data at all levels of distributor, detailer, e-commerce, consumers and all levels of municipal supervision agencies to consensus and share.

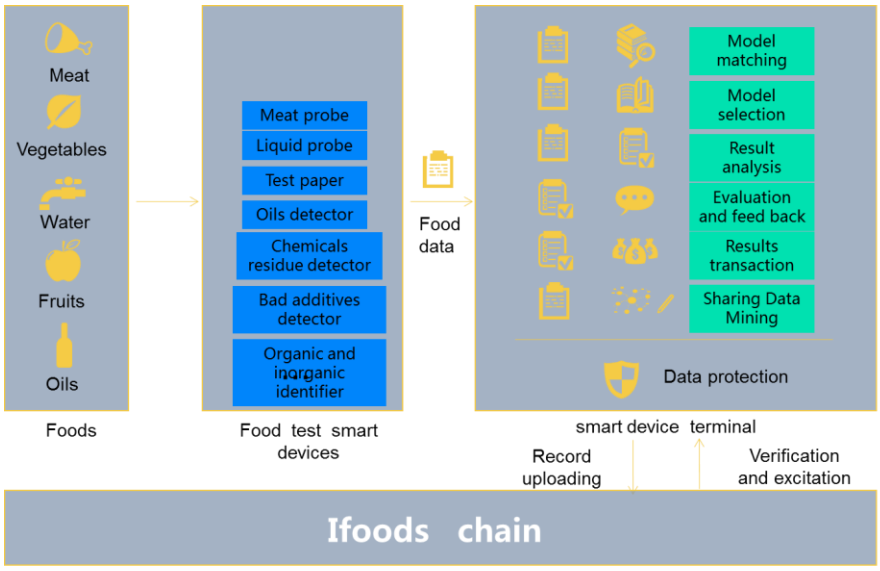



**Fig 4.1 Smart food test and mining device**

The food test smart device includes meat probe, liquid probe, test paper, oil testing device, pesticide residue testing device, bad additive detection instrument, organic and inorganic identification instrument, etc. The data is transmitted to the DAPP of the mobile phone by Bluetooth, and then is showed to the users. The user confirms and uses the mobile APP's wallet module signature, and uploads the data to the Ifoods chain block chain system for permanent storage, and the smart device triggers the back end detection system of the Ifoods chain. Using the uploaded data as input, combined with the tools provided by our food experts, the results and conclusions of the test are feed backed to the user's mobile APP, and the user can choose to upload the test conclusion to the block chain. This conclusion can be used as an open and non-tamper able test conclusion. For valuable data, users can query the tested data and conclusions through the block chain browser.

## Mining

The participants in the Ifoods chain eco include food testing experts, regulators, food enterprises, merchants, inspector and consumers, all of which can share the desensitization data and get IFOOD awards.

With intelligent hardware such as super probe, participants share the desensitization information such as consumption information, food detection information, location information and so on with the premise of privacy protection, and obtain IFOOD rewards through smart contracts.

## 4.2 Distributed data value protection and delivery

Based on block chain technology, the data of individuals and organizations will be protected by Ifoods chain. At the same time, data models will be paid for data transmission and data transactions value delivery.

Data model usage and protection

Traditional centralized detection method cannot effectively protect expert model data. Ifoods chain can guarantee the security of expert data model using DAI technology. For the expert institutions uploaded standard data, Ifoods chain will be classified reasonably and intelligent matching. When consumers have demand for data test, they can choose to pay IFOOD to data experts using DAPP display through smart contracts, and then carry out the data tests.

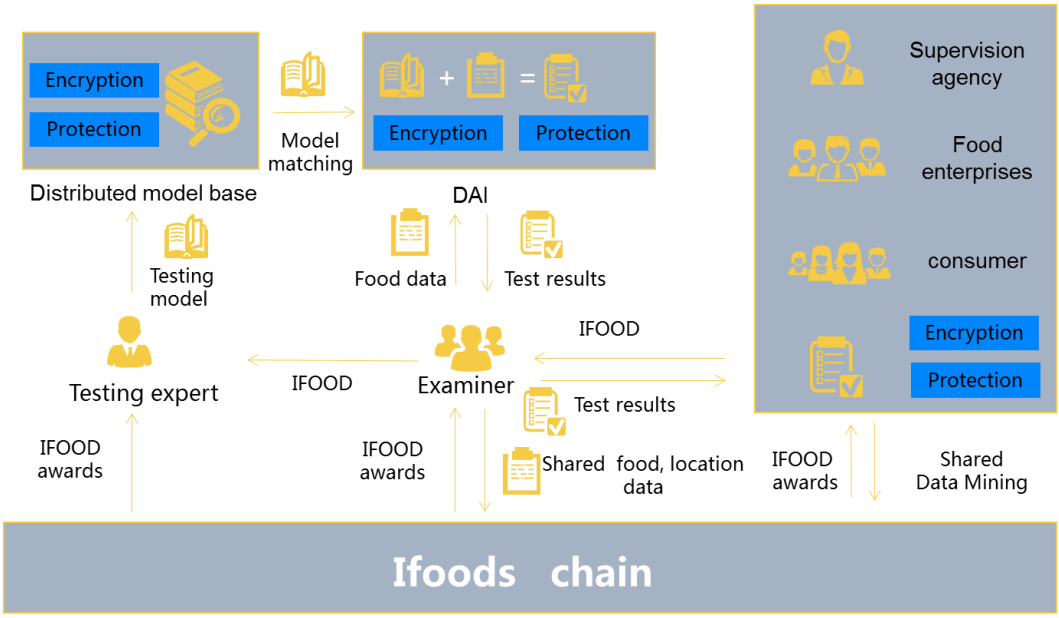



**Fig 4.2 Distributed data value protection and delivery**

Measurement and sale of data

Consumers are the sole owners of their own data and can provide data to others

for IFOOD return. It includes food data either currently tested by consumers or obtained in different places in the past. Meanwhile, based on smart contracts, purchasers can only have the right to use data, by which purchasers can get food data statistics more cheaply and rights and interests protected.

Shared data masking and daggering

Ifoods chain eco effectively protect the data of all the participants including food data, consumption data, testing data and location data. The participants can obtain awards by sharing their own data masking

## 4.3 Distributed food test network

The distributed food test network, based on the shared, open and distributed consensus of the block chain, is not only the central testing organization, but also the thousands of super probes and other smart device owners. Food inspection experts, supervision regulators, food enterprises and school canteen are included in. it truly participates in food safety and quality testing, and create a win-win and sustainable distributed food inspection network. At the same time, every participant can share regional food quality data and get IFOOD award. By using smart contract transaction and DAPP display, consumers can get valuable regional food quality information across regions and time zones at home.

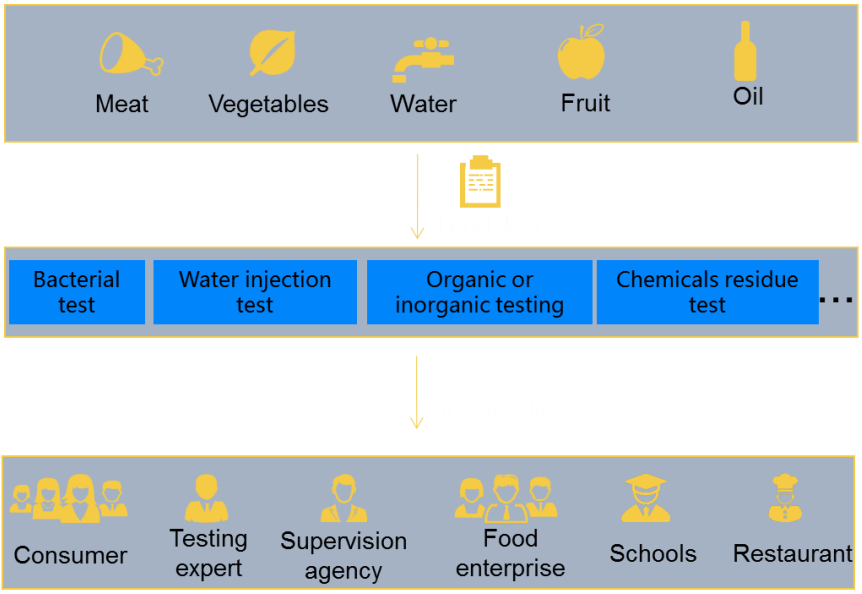



**Fig 4.3 Distributed food test network**

## Consumer’s participation:

Consumers quickly and conveniently test the foods, such as beef, pork, mutton, vegetables, bacteria etc. Use intelligent hardware to collect data, match transactions in Ifoods chain, pay by smart contract, and feed back the analysis results of DAI to DAPP.

## Food test experts (agencies) eco participants:

Food test experts (agencies) eco participants, such as pork test experts, bacteria test expert, and vegetable test expert etc will upload their data-based of research achievements and patents to Ifoods chain, and improve the whole Ifoods chain eco public chain.

Ifoods chain will protect the core interests of data testing experts, and encourage experts to provide more food data security detection models. From vegetables to meat, from organic to inorganic, from pesticide residues to heavy metal pollution, the distributed network of food testing will gradually cover the whole food industry.

## Supervision agencies participation:

Distributed food safety and quality test network, the supervision agencies can collect or purchase credible data for analysis, and quickly get regional food quality data. It can also use intelligent hardware to supervise food safety and on-site collect the food data of the vendors to be monitored and feedback the results in 2 minutes to improve the efficiency of supervision and the credibility.

## Food enterprises participation:

The relative food purchasing enterprises can use smart devices to test large quantity of the purchased foods. The cost of usage can be reduced by using Ifoods chain quick test, and get results immediately and increase sampling coverage.

## Schools and restaurants participation:

Public institutions such as schools and restaurants can use intelligent equipment, carry out food safety and quality testing, ensure the safety of the material and reduce the cost of purchasing.。

## 4.4 Distributed eco maintenance and administration

The distributed food safety and quality test eco is guaranteed by using Ifoods chain trade matching mechanism, payment mechanism, evaluation feedback mechanism, and according to the super node voting governance, and the whole people participation.

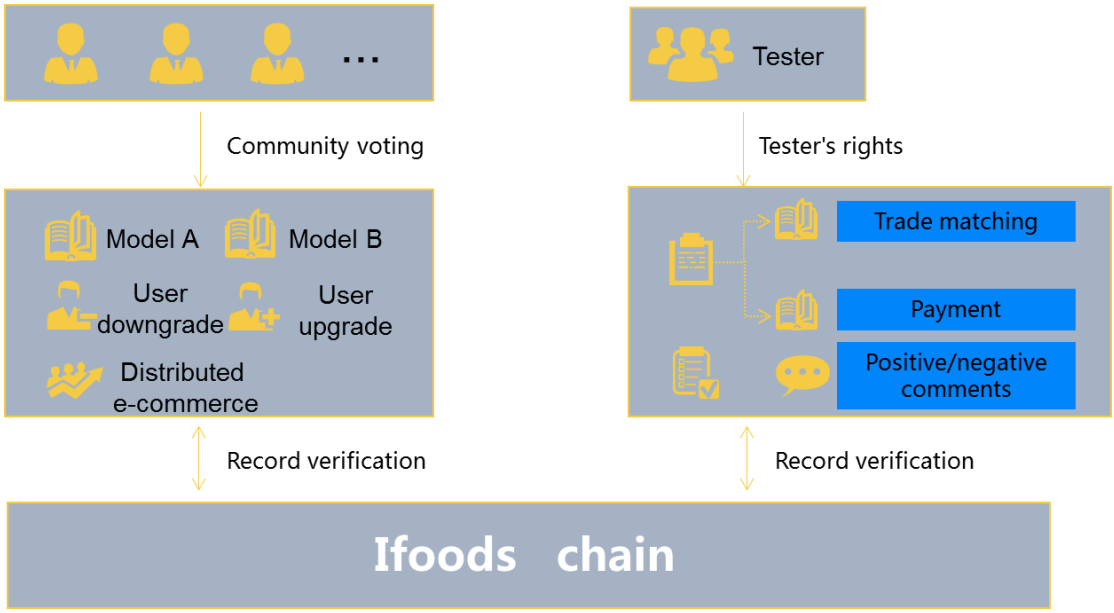



**Fig 4.4 Distributed eco maintenance and administration**

### Transaction matching and payments

Ifoods chain will classify the standard data to ensure that the detection data match the corresponding model. Participants choose the model freely based on DAPP and pay by smart contract, by which the safety of transactions is guaranteed and the cost of the third party is reduced.

### Evaluation feedback

All participants who use standard data can feedback the evaluation results after use, and the block chain will ensure that the evaluation cannot be changed. At the same time, the cumulative evaluation results are intelligently detected.

## Community voting

Ifoods chain uses community voting to make decisions and votes according to super nodes,

(1) community voting data (standard data of experts, institutions, etc.)

(2) community voting for malicious data uploaded and processing of malicious accounts.

(3) community voting selection of enterprise distributed e-commerce

## 4.5Distributed e-commerce network

Ifoods chain based on the large data obtained by the probe system, block chain technology, and AI to establish the Distributed E-Commerce DAPP, to ensure the safety, high quality, and verifiable of the distribution of electric business food. Entering e-commerce DAPP requires other nodes to vote on its block chain data to ensure a fair access to the platform and to jointly build a distributed security and high quality food sales eco.

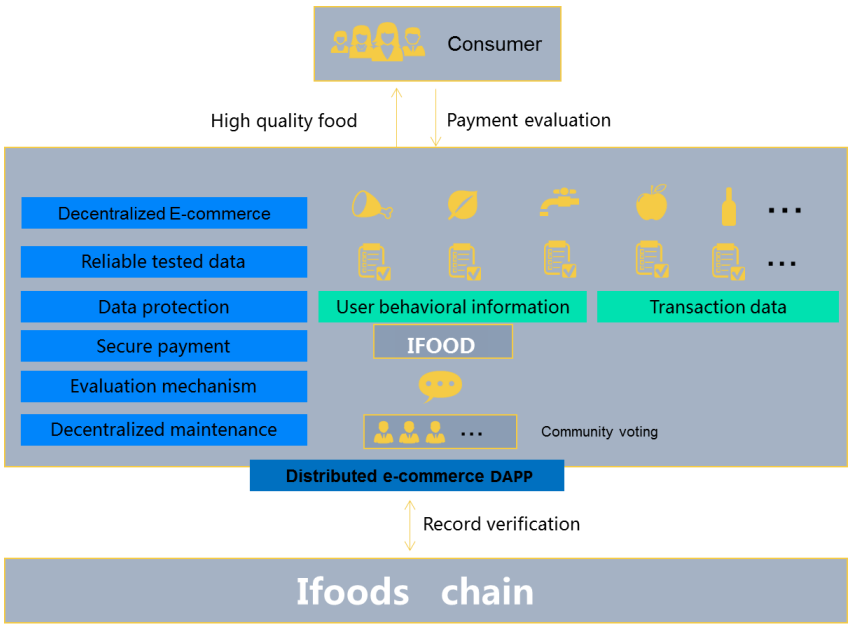



**Fig 4.5 Distributed e-commerce network**

The distributed e-commerce network will select high quality food suppliers through community voting. The merchants of the distributed e-commerce network record and upload food safety detection data to Ifoods chain, users choose to purchase food information, and feedback the evaluation information in real time. Distributed DAPP will protect consumers' behavior data and transaction data such as click, browse and purchase. The transactions in the distributed electricity supplier use IFOOD to settle accounts, reduce the cost of the third party, and ensure the safety of the transaction.

# V. Ifoodschain technological models

Ifoods chain requirements for block chain: support high frequency trading, support TPS >3k, block time between 6 seconds and 8 seconds; with the storage capacity of general data, can customize and expand the data structure of the transaction; have a better storage function for large files; can provide turing complete and easily editable smart contract platform. Ifoods chain will build its own public chain system to better create a distributed food safety testing eco.

## 5.1 Ifoods chain technological structure

Ifoods chain builds a secure, trustworthy and shared food safety and quality test network that is based on block chaining technology, protection of consumers, inspector, and testing experts through smart contracts and DAI technologies; It is capable of quickly testing the food quality and safety by food test smart devices with incentive mechanisms and block chain sharing technology features, which attracts multiple parties to participate in the eco; guarantee the security of transaction information through block chain storage and distributed storage; and develop a variety of distributed applications in the field of food quality and safety through a series of DAPP development.

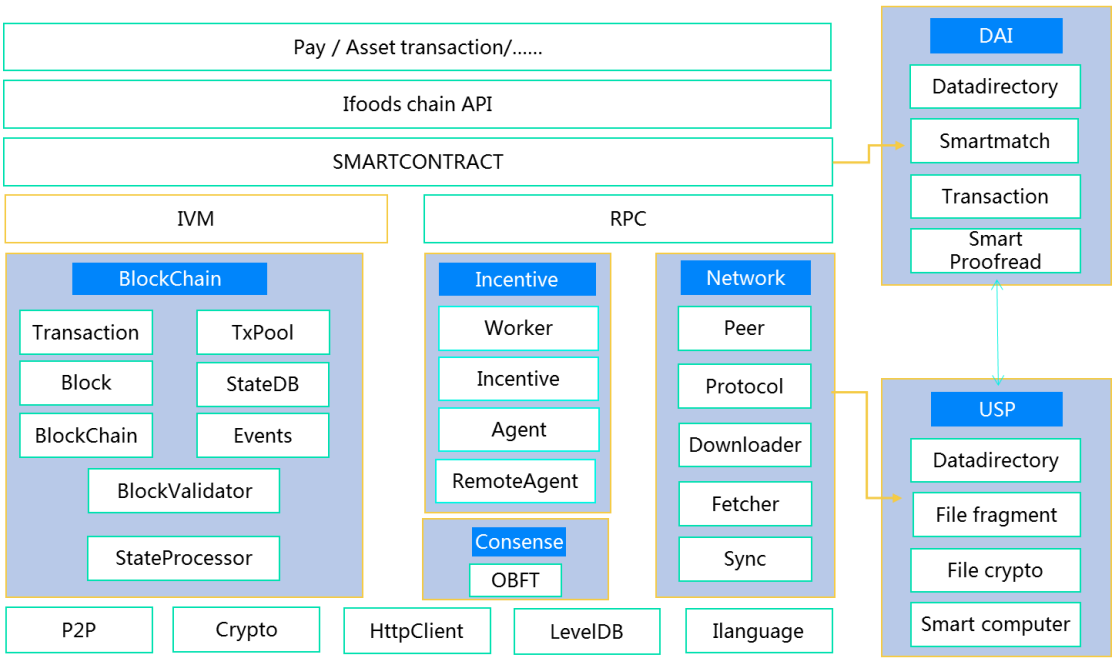



**Fig 5.1 Ifoods chain technological structure**

## 5.2 Core technology

### Public chain

The public chain of Ifoods chain is consisted of value agreement and value network. The Ifoods chain public chain value agreement includes smart devices, asset wallets, and data evaluation mechanisms. Ifoods chain public Chain Wallet provides personal or institutional tools for exchanging, paying and settling accounts. At the same time, the Ifoods chain public chain maintains the entire Ifoods chain public chain self development and incentive system through effective participation and trusted data analysis services, as well as the needs of food safety tests. At the same time, based on DAI and consensus mechanism, a distributed direct supply platform is established to provide safe and high-quality food.

The Ifoods chain public chain value network is composed of functional service area and function module. With the underlying protocol of block chain, all transaction data of Ifoods chain public chain are recorded and written into each node by verifying the data sharing mechanism, by which real data can be more simple and reliable through the smart contract. With the involvement of everyone in the activity, their own smart contract executors and data sharing, and ensure the fairness and reliability of participation through the common data verification mechanism is accomplished. Through the sharing and writing mechanism of block chain, we form a callable and verifiable functional service network parallel to the real world.

Distributed account book is an important infrastructure of Ifoods chain reliable storage. Distributed account book technology's features of decentralized, un-tempered with, and common accounts are the keys to realize reliable distributed multi-party network of Ifoods chain. Distributed account technique is a foot stone of Ifoods chain operation, which can guarantee the data and secure transaction of Ifoods chain eco.

### USP infrastructure

The core structure of Ifoods chain is based on block chain technology and distributed storage technology, and provides a massive data storage service for the food industry.

In the Ifoods chain infrastructure, a USP (universal service platform) system is designed that serves the needs of different users of the Ifoods chain block chain system in the food

field.

We incorporated the core function of the Ifoods chain block chain and the USP of various service systems. After incorporation, the whole structure is used as the middleware of the Ifoods chain block chain system. The USP system to be used by different users will be reserved for the front-end application of the open API interface and SDK. The USP system designed by Ifoods chain has the following advantages:

(1) simplify and unify the docking of Ifoods chain system;

(2) enables users, developers and other vendors to access and accept Ifoods chain services anytime, anywhere, using various devices and accesses.

## DAI

The application scenario of Ifoods chain involves related technologies such as transaction matching, model selection, data analysis and so on. The use of these technologies, including model training, is based on artificial intelligence with depth learning algorithms, and will consume massive computing power. Therefore, we introduce distributed artificial intelligence (DAI).

DAI is the combined product of artificial intelligence and distributed computing. The proposal of DAI has met the needs of designing and building complex intelligent systems and computer supported cooperative work (CSCW). The purpose is to study the behavior and methods of the distributed intelligent group agent in logic or physics, and to study the knowledge and skills and planning of coordination to operate it, and to complete the multitask system and to solve all kinds of problems with clear goals.

## Super probe system

Super probe is a mature application of Ifoods chain smart device for meat test. The super probe system is a MEMS food test DAPP block chain application system designed by Ifoods chain for consumers, businessmen and food enterprises. The super probe is easy to carry and can be used to test food related data quickly and instantaneously. Compared with the standard database of ecological chain such as experts, it helps consumers choose.

Meat super probe sketch map


Mobile phone schematic

Mobile terminal is the main feedback channel after consumer detection.

(1) Display a consumer's test data and its deviation from the normal value.

(2) Display the testing data of shops: display a period data tested and analysis.

(3) Display location test data: display the test data in a location area in a certain period and analysis.

In view of the actual supermarket purchase scenario of consumers, the super probes designed by Ifoods chain have the following advantages:

(1) Fast immediacy

The test duration of the super probe is designed currently in the 120S, which enables consumers to obtain the reference information of food thickness in a very short time.

(2) Easy to carry

Considering the actual use of the scenario, the design of super probe will give full consideration to the convenience of the consumer. The parameters of the super probe are designed at present: length <20CM; width <10CM; thickness <5CM; weight <0.5KG

(3) The inviolability of data ownership

Every test data belongs to the data creator, and user has the absolute privacy of the data, and the benefit also belongs to the data creator.

## Smart contract

Smart contract is featured as an event driven, state, multi-party recognition, running on the block chain, and automatically process assets according to the preset conditions. The greatest advantage of smart contract is to use program algorithm to replace the decision and execution of a contract depending on people. When an smart contract is assigned to a block in a block chain and the external data and events are entered into an smart contract, the corresponding

actions will be automatically output according to the internal preset response conditions and rules, and the results will be recorded on the block. In essence, smart contracts are also a section of the program, but unlike the traditional IT system, smart contracts inherit 3 features of the block chain: transparent data, no tampering, and permanent operation.

### Block chain certificate

Block chain certificate is an important technical point of Ifoods chain block chain platform.

In eco construction, data cannot be tampered with is the key. The traditional proof of evidence is not strict, because these evidences are easily forged and destroyed. To complete the proof, it is necessary to rely on a strong chain of evidence. It is impossible for anyone to forge and destroy it, or to say that the cost of forgery is almost impossible. The block chain technology extracted from Bitcoin system has such powerful data protection ability.

Block chain certificate ensures that food safety and quality inspection information is recorded on the block chain. The information stored on the block chain eventually forms an effective chain for food safety. Because the whole chain of evidence is composed of multiple links and multiple nodes, it also somehow ensures the reliability of product information. Once the food is in the hands of consumers and they want to know the information about the food, it is easy to get relevant information by querying block chain.

## VI. Ifoods chain digital token

### 6.1 IFOOD introduction

IFOOD is a decentralized digital token of Ifoods chain eco.

### 6.2 IFOOD advantages

IFOOD is the only currency circulating in Ifoods chain for food safety and quality technological test. IFOOD is a centralization of digital assets, transaction security can be querying. There is no third party intermediary cost to protect the interests of participants.

## 6.3 IFOOD circulation model

In the Ifoods chain eco, IFOOD will carry out two levels of liquidation to safeguard the common interests of investors and eco participants. IFOOD is only one way flow from the exchange to the applied eco.

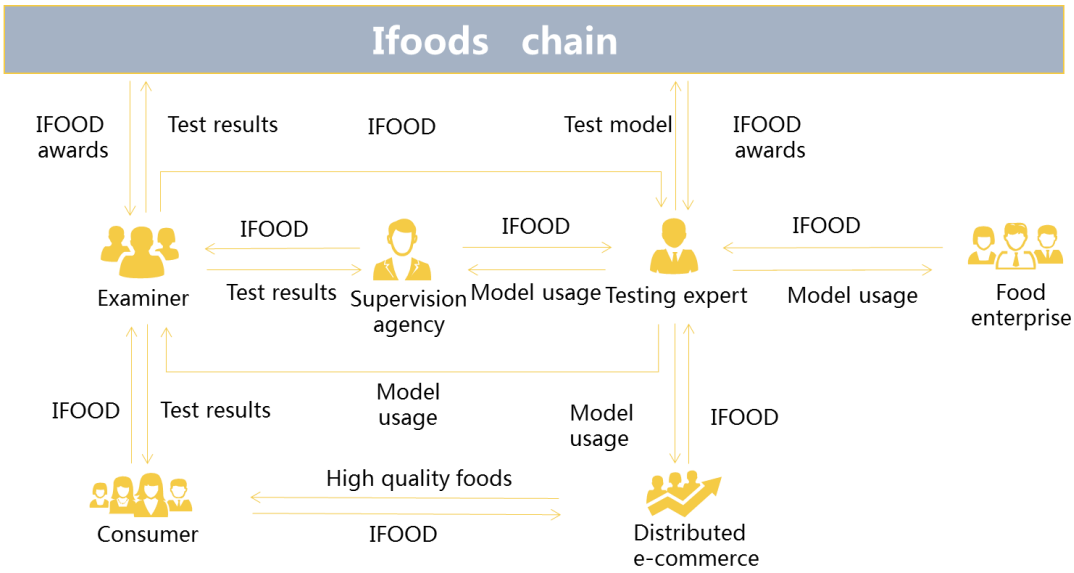



**Fig 6.2 Eco circulation model**

In Ifoods chain eco, IFOOD is connected with examiner, consumer, food testing experts, food enterprises and distributed e-commerce.

## Ⅶ. Ifoods chain digital token distribution

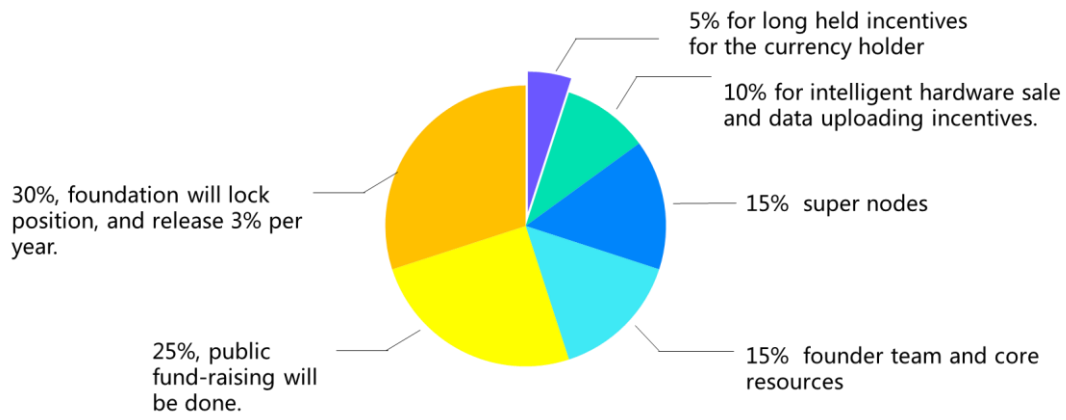
The fund raised by Ifoods chain is all used for platform development. The total number of IFOOD certificates is 10 billion, and the total volume is constant. IFOOD is currently based on the standard digital token of the chain of ERC20 in the Ethernet block. In the future, the public chain Ifoods chain will be developed and the IFOOD based on Ethernet will be replaced by 1:1.

## 7.1 Foundation administration

We have established a foundation in Singapore, and the Ifoods chain platform is administrated and developed by the foundation.

## 7.2 Pass-through offer plan

Fund-raising involves 2 billion 500 million IFOOD certificates, accounting for 25% of the total project, which is effective in promoting the operation and development of the project. The overall distribution is as follows:




## 7.3 Distribution details and nodes

The total fund-raising involves 2 billion 500 million IFOOD, accounting for 25% of the total, and can be exchanged for ETH.

All the certificates raised will be deposited in the multi-signed purse to be used by multiple signatures. The specific use and administration will strictly follow the rules of the Ifoods Chain Foundation's administration mechanism.

The Ifoods chain core team and the resource parties involved in the platform are 15% IFOOD certificates, which will be all frozen after the first stage of the collection, the first release of 4.5% after a year on the platform, and the release of 10.5% in second years. IFOOD

certification will be open to trading on the stock exchange according to compliance requirements.

## 7.4 Project schedule

2017.08 Ifoods chain built the project team
2017.09 Ifoods chain' public chain built technology architecture,started USP System Architecture Design
2017.10 Ifoods chain's Big Data Lab was set up
2017.11 Ifoods chain's Smart Hardware Laboratory was set up
2018.01 Analyzed Intelligent Hardware Research Laboratory Algorithm
2018.02 Big Data Analysis Lab collected data on global beef.
Early 2018.03 Released White Paper 1.0 version, official website online
Middle 2018.03 Block Chain Platform Test Edition Online, Browser Released, Desktop Edition Wallet Released
Late 2018.03 Data analysis of 900 beef groups worldwide completed by the Big Data Analysis Laboratory
Late 2018.03 The research and development of Super probe analysis was completed
2018.04 Opened Super probe TOP100 plan
Late 2018.04 Completion of TOP100 recruitment
2018.05 Completed the Ifoods chain test.
2018.06 Ifoods chain will Land Exchange
2018.06 IOS version wallet will be online
2018.06 Super Probe Designs will be released
2018.07 Ifoods chain's USP system will be online
2018.08 Will be Releasd the Super Probe DAPP DEMO Edition
2018.09 Will be Releasd the Super Probe Smart Hardware DEMO Edition
2018.10 Will be tested the Super probe prototype on a global scale.
2018.11 Ifoods chain's distributed community will be online
2019.01 Will sell Super probes worldwide
2019.06 Super probe DAPP digital asset package will be online
2019.12 Ifoods chain main network will be online

# Ⅷ. Ifoods chain team introduciton

Ifoods chain core team is consisted of experienced experts who have committed to the relative industry for many years.

## 8.1 Core team

### Carlone Founder & Director of the foundation

In 2015, entered the field of block chain, the senior practitioner of block chain.

2016 China block chain industry conference general planning, block chain + agriculture sub forum host;

2018 China financial science and Technology Innovation Award Committee

Block chain + agricultural laboratory promoter;

Member of integrity Committee of Beijing Society for promoting public trust;

MCA International District chain innovation application alliance expert committe member

In the first inventor's identity, owns a number of block chain related invention patents and software copyright.

Executive director of China's food safety traceability center;

Beijing Education logistics procurement platform sunshine Rainbow food safety consultant.

Original source chain founder and executive director.

### Fan Zhikai founder & CEO

Master's degree in Instrument Science and Optoelectronics Engineering, Beijing University of Aeronautics and Astronautics.

In 2013, majored in the block chain, deeply understood the chain operation principles and familiar with the operation and planning of digital products online transactions.

In depth research on global front raster sensors and intelligent hardware;

Planning and operating over a number of Internet projects;

Responsible for the information management platform project of the State Food and drug administration.

### Lin RooJee (U.S.) , founder & chief scientist

Ph. D. in food science, University of Georgia, USA;

Served as a senior manager of science & technology, CTO, a member of M & A.

Adviser to the national food safety & technology center of the United States;
The honorary director of the China Meat Research Institute;
Chairman of the new China food group, China; chairman of the food company (Beijing) Limited.
Owns a number of patents in food technology, research, production, testing, and technology optimization.
Deeply studied the application of artificial intelligence.

## Liu Yuan, CTO

A believer and early preacher of the block chain industry, proficient in the principle of P2P network, consensus algorithm, asymmetric encryption, block chain data structure, smart contract and so on, and have a comprehensive study on representative public chains such as BTC, ETH, NEO, EOS and so on. Deep application scenes of the public chain, the alliance chain and the private chain. Carried out the block chain infrastructure solution design and landing for many industries, multiple applications, such as Trinity based on NEO, ETH based color system, and block chain solution for power industry.
11 years of experience in the R & D of Internet infrastructure products, once served in China Telecom, NOKIA, HUAWEI and so on, several core exchange products, wireless communication base stations and controller products, and KVM virtualized cloud computing products have created the era of 100GE core exchange, mobile Internet era and cloud computing era. Firmly believe that with the development of block chain industry, we will enter a new era of revolutionary value transmission.

## Sun Zhiwei, COO

MBA of Beijing Institute of Technology;
In 2015, contacted block chain, provided the design of operation consultation for multiple block chain projects, including project team building, media promotion, community construction and operation, currency value management and so on.
Worked in China North car group, Beijing automobile group, famous management consulting organization and Investment Company.
Provided strategic planning, investment and financing and business model design for A listed companies.

## Jesus Garia (Spain) Global strategy officer

The founder of the Spanish GTS investment company;
The founder of the Arroyo chain restaurant & President;
DEIMOS technology company strategic advisor;
Spanish meat processing plant investment advisor；

### Zhong Weiguo, CMO

Former root chain co founder and chief market officer;
10 years of experience in the dissemination and promotion of the financial industry;
4 years experience in block chain industry marketing, familiar with the related operation of block chain industry intellectual property;
Connecting with the chain related investors of block 100 block, maintaining deep communication with block chain media and community.

### Feng Lishuang, Chief hardware scientist

Beijing University of Aeronautics and Astronautics, doctoral supervisor, deputy director of micro and nano measurement and control center;
Won the national "863" advanced collective and individual commendation;
Focus on MEMS sensor research;
It has won 1 provincial and ministerial level technological invention awards, 2 technological progress awards and 18 Chinese invention patents.
More than 100 academic papers have been published in journals and conferences at home and abroad, including more than 20 in SCI.

## 8.2 Consultant team

### Li Yanbo, block chain technological consultant

Block chain technical expert, On-chain co-founder;
NKN founder;
Linux Kernel network layer core code contributor;
At Stanford University, he studied cryptography and worked in Qualcomm for many years. He specializes in distributed system architecture design and network protocol implementation;
DNA core R & D and designer of open source block chain platform.

### David（Li Yiling），block chain operation consultant

Trinity founder;
FourierPR co-founder;
China's top encryption economic project PR and consulting company, Fourier's customers;
List the top one hundred of coin market cap and cooperate with FBG.
Founder of base stone technology;
Media website inwecrypto.com, multi asset wallet InWeWallet founder。

## Yi Fengping, block chain municipal affair consultant

Trinity co-founder;

The district chain industry expert of government affairs, with rich government background and senior block chain project channel development experience; at the end of 2015, entering the Tai Fang fan community, has been responsible for the expansion of the application and technology of the block chain in the social and government fields; once served as the director of government affairs and Tongji of Shanghai distribution information technology company. Vice Dean of the Research Institute of thawing science and technology block chain;

To participate in the compilation of the Ministry of industry's block chain reference framework and government related block chain policies.

Presided over the cooperation and landing of the Guiyang municipal government's first honest peasant project in China.

## Bieito (Spain) , global strategy consultant

President of Spain's largest ABC newspaper group.

Adviser to the Spanish government affairs

## Chai Weizhong, food safety consultant

Ph.D. in nutrition (after), Professor, college of public health, Peking University.

Engaged in research and teaching of food hygiene;

The European food safety system, the development report of China's nutrition industry, public nutrition and social and economic development, etc., and dozens of professional articles in international professional conferences and periodicals

## Zhong Weike, food testing technology consultant

Director and researcher, South inspection center, China Academy of inspection and quarantine.

In 2000, he graduated from the ecological environment research center of the Chinese Academy of Sciences. It has been engaged in the detection and research work of chemical contaminants in food and environmental samples for a long time; 3 National Natural Science Foundation and 3 projects by the Ministry of science and technology. 5 national standards and bank standards were formulated, and more than 40 papers were published in core journals both at home and abroad. Good at dioxin and pesticide residues analysis in food.

## IX. Cooperative organization

At present, participants in Ifoods chain global food testing and sharing eco construction includes:

Food safety block chain laboratory, China Meat Research Institute, China Inspection and Quarantine Institute South testing center, Beihang University Photoelectricity Technology Institute, Chinese People's Public Security University, fufu brand agricultural business school, VUB-Vrije Universiteit Brussel (food testing), Horqin cattle industry, and Fude food

Investment institutions & partners:

GTS capital (Spain), Horqin cattle industry, Shanghai pin Shang, Trinity, intrinsic capital, digital torch technology, star chain capital, VNBIG,

Spain ABC newspaper industry, currency world, vernacular block chain, ear finance and finance, fire coin (Singapore), American society, block chain Chinese network, currency, BCfans.com, Jinniu finance, Kcash, fusion media block chain center.

## X. Disclaimer

The Ifoods chain Foundation believes that there are numerous risks in the development, maintenance and operation of IFOOD and other encrypted currency and block chain systems, many of which are beyond the foundation's control. In addition to the other contents described in the white paper, each IFOOD purchaser should carefully read, understand and carefully consider the following risks.

The each buyer of IFOOD should pay special attention to the fact that IFOOD exists only in the virtual space of the network, and does not have any tangible existence, so it does not belong to or involve any particular country.