

# InsurChain: A Decentralized Insurance Blockchain Ecosystem

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## 1. Abstract

Insurance is an essential part of the finance system and a huge market in every economy. However, issues like stereotype policies, lack of efficiency and lack of transparency are still seriously impeding the development of insurance. All these issues are in dire need to be addressed.

Insurance and blockchain have natural consistency in essence. The fundamental purpose of insurance is to transfer risks and it is featured with sociality, uniqueness, security and long-time existence. Blockchain, on the other hand, is based on consensus of P2P networks with features like traceable, immutable, unforgeable and timestamps. So insurance and blockchain are highly compatible with each other. We believe blockchain will become an essential part of insurance and disrupt the industry completely in the future.

On basis of this belief, we are going to build a blockchain ecosystem for insurance and it is going to be named – InsurChain. InsurChain includes InsurChain Blockchain, InsurChain applications (SelfGuard, BizGuard and PalsGuard) and open interface to allow every use to design, purchase, invest insurance and file claims which can be automatically processed. In InsurChain, no intermediaries are needed, every step is pre-programed based on certain rules and the ecosystem can be fully operating on its own. This will be a brand new insurance blockchain ecosystem.

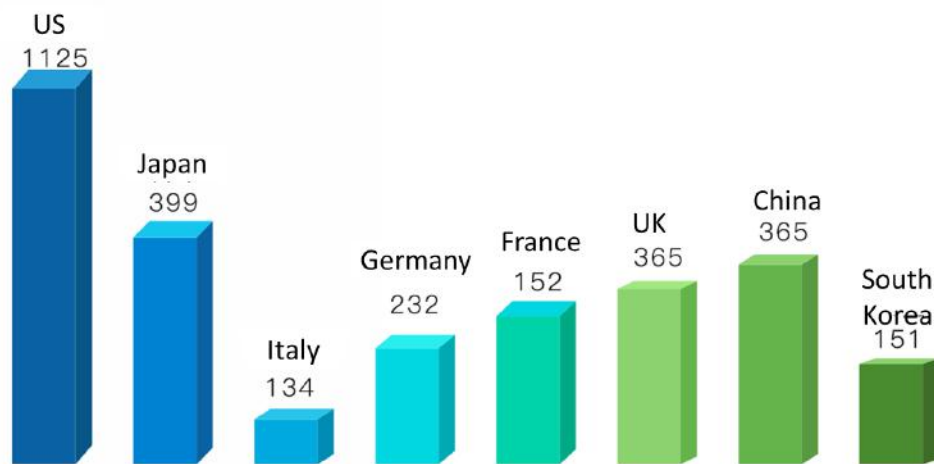
Founding members of InsurChain have ample experience in insurance operating and investing with deep understanding of the industry. We are also enthusiasts of blockchain who believe blockchain will re-shape the old industry in the near future and we will be in the front seat to see it coming.

## 2. Insurance Market

### 2.1 Potentials

Insurance is a huge yet fast growing industry with unlimited market potentials. Global premium income is 4.8 trillion USD.

With the development of economy, insurance demands are growing rapidly all over the world. According to *Global insurance review 2017, and outlook in 2018* from Swiss Re, the world economy will grow on a steady rate in 2018 and so will insurance premium. Global non-life premium will grow at 2.2% and 3.0% 2017 and 2018 respectively. Global life premium will grow 4.8% and 4.2% in 2017 and 2018 respectively. Emerging markets, especially those in Asia, will be the boost for premium growth. Premium income in China reached 2.31 trillion RMB (360 million USD) in the first half of 2017, a 23% increase compared with the same time last year.



Premiums in 2016 (billion Euro)  
Data from Allianz World Insurance Market Research

## 2.2 Challenges

Although insurance is still developing rapidly on a global scale, its development has encountered numerous challenges. The major challenges insurance are facing are as follows:

- A) Too many intermediaries.** Traditional insurance is highly reliant on intermediaries. Most of the premium has been used to cover channel cost and customers couldn't be properly insured.
- B) Lack of data protection.** Insurers are in possess of huge amount of customer data including private data such as policy information, family members and phone number. Insurers are not serious on protecting customers' privacy and caused customers troubles.
- C) Misleading in marketing.** Insurance agents or salesmen are lying or withholding information when trying to convince consumers to buy their policy. This has damaged the rights of consumers as well as the reputation of insurance.
- D) Lack of innovation.** Most of the policies insurers offering are similar in every aspect. It can address certain problems consumers are facing, but it can't suit all personalized demands.
- E) Moral hazard.** Will consumers be less careful when they know they can get covered? Probably yes, and it placed insurers in a difficult position. Moral hazard brings losses to insurers while brings no benefit for consumers.

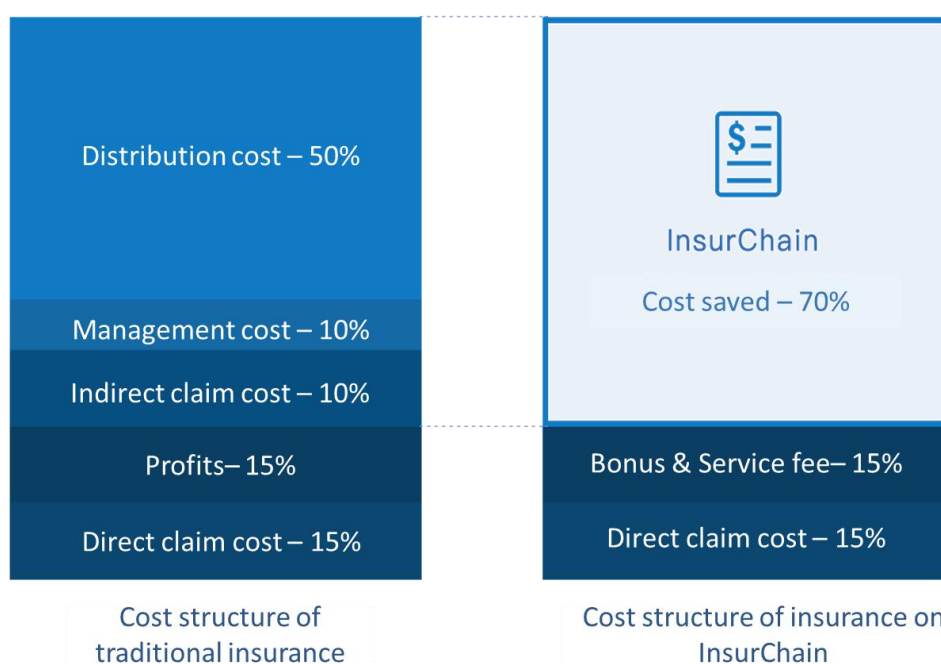
## 2.3 Opportunities

All these challenges can be addressed with the help of blockchain. Blockchain is a distributed ledger technology with features such as transparency, immutability and unforgeability. All these features are perfectly matching the nature of insurance. By leveraging blockchain, insurers will be able to collect consumers' data on chains rather than asking them to provide materials repeatedly, smart contract can replace human labor in claims and all the fraudulent behaviors can be prevented. All

the transactions on blockchain will be immutably recorded and traceable, so it can help insurers to accurately profile each customer and offer personalized pricings.

Blockchain will be the underlying technology for the next-generation insurance and the engine to boost insurance development. Blockchain-based insurance will be a vital part of the industry and maybe even redefine insurance.

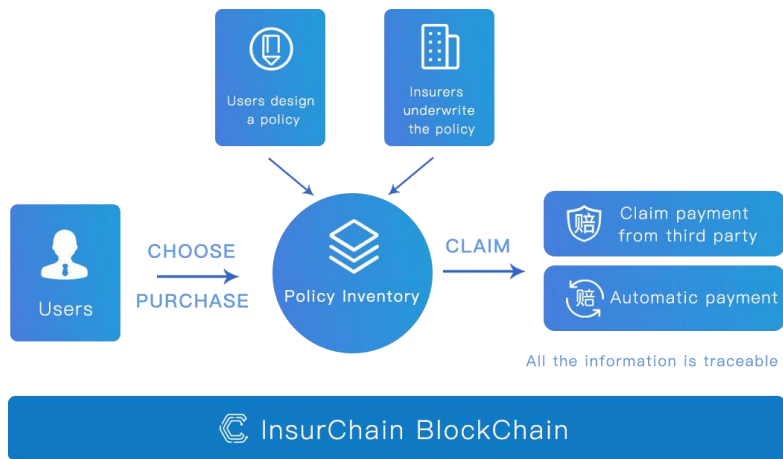
We are planning to build a blockchain-based insurance ecosystem, where every user can design, purchase and invest in insurance. This ecosystem will be able to satisfy customer needs, reward those who contribute ideas and innovations, and eliminate intermediaries in traditional insurance, lowering operation costs. Take health policy as an example, InsurChain ecosystem can save up to 70% cost for insurers.



### 3. Solutions

#### 3.1. Products and processes

We will build a decentralized, peer to peer insurance marketplace based on InsurChain platform and keep it functioning properly by making a series of rules.

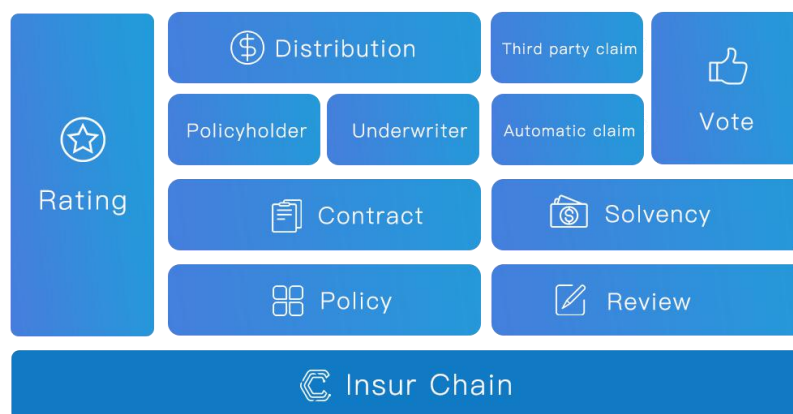


Blockchain technology will ensure all the data in InsurChain is transparent and safe.

Innovations InsurChain will provide include:

- A) Users can directly purchase insurance products designed by professionals and insurers by spending InsurChain tokens. They can also post their own personalized demands in the system with a certain token cost.
- B) When a new demand releases, InsurChain system will match it with underwriter(s). Underwriter(s) can be insurers or investors.
- C) Users pay with tokens and underwriter also pays certain number of tokens as margin. And an electronic policy will be signed with smart contract.
- D) When an agreed event triggers a claim, the smart contract will automatically process payment and reimbursement.
- E) If either party has doubts regarding to the result, a voting process will be automatically launched and the disputes will be settled through a poll.

### 3.2. Structures and features



#### A) Policy design

Everyone on the InsurChain platform can issue an insurance policy. Ordinary users can do this by filling out a pre-set form. For advanced users, such as actuaries, they will have higher authority to design a more complicated policy. InsurChain will launch a tool to test every new product and make

sure it is applicable and compliant.

#### **B) Policy rating**

We will record all the data of each policy on InsurChain, including policy details, sales and claims and all the data is immutable. And we will design a rating system to rate each policy from various angles and conditions. So, consumers will be able to find the most suitable one.

And the rating is dynamic, changing from time to time based on customer feedbacks.

#### **C) Distribution**

All the policies on InsurChain is signed through smart contract. It is safe, verifiable and can be launched by anyone. All the trades are encrypted and happen in real time. Third party platforms can help with the distribution of each policy and when they successfully distributed a policy, they will be rewarded with InsurChainCoin tokens.

#### **D) Claims**

Simple claims can be settle with the help of smart contract. InsurChain will introduce third party adjusters to handle more complicated claims. Users will be able to upload relevant materials for his claims and the materials will be cross checked and recorded on the chain.

#### **E) A voting system**

InsurChain will introduce a voting system in the future. The voting system is designed to resolve disputes in claims. If either policyholder or underwriter is unsatisfied with a smart contract settlement, they can spend InsurChainCoin tokens to file a vote. The vote will invite credible users to make the vote. Algorithm will make sure those with most credible behaviors will be invited.

## **4. Applications**

Insurance will be covering every moment of people's life and so will InsurChain providing services for every scenario. For now, we have made plans to develop three applications and they are BizGuard, SelfGuard and PalsGuard. All the developers around the world are welcome to join in the InsurChain ecosystem and deliver more apps for users.

### **4.1. BizGuard – smart contract based insurance solution for enterprises**

BizGuard will be the first application of InsurChain.

Scenario-based on-demand insurance has been gaining popularity in recent years. It usually works this way, a company needs a customized insurance solution to cover a specific business scenario, and an on-demand InsurTech startup will collect data from them and find out the insurance demand that has not been satisfied by insurers. Then, the startup will design a customized solution to address this demand and seek underwriting from insurers. This approach has helped to improve the experience of on-demand insurance, but it is still not simple enough.

Actually, most of the scenario-based insurance can be put in the form of a smart contract. And that is what BizGuard will achieve.

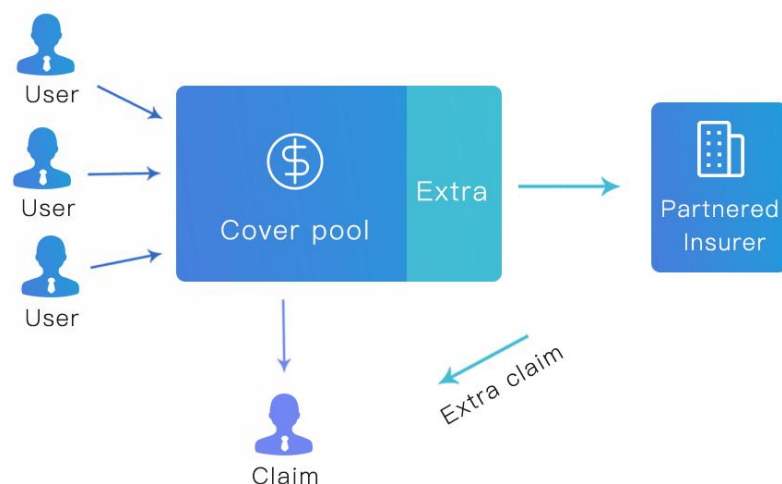
Take house sharing business as an example, Companies like Airbnb can launch an accident policy on InsurChain, all terms will be predetermined into a smart contract. If an accident occurs, tenant can upload photos of the scene and a qualified third party will exam them and process claims. The timestamps on the chain can be used to verify the validity of accidents.

#### 4.2. PalsGuard – insurance solution for communities

PalsGuard works in P2P insurance models, just like Friendsurance from Germany. We will build a community to let people with same demands to share risks and it will cover property, liability and health demands.

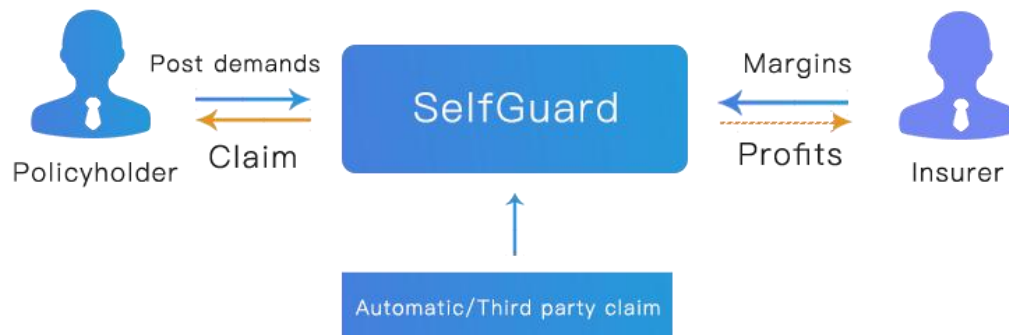
The essential part of PalsGuard is to build a trust-based community. The best way to do it is to build it among friends and relatives. Everyone in the community shall pay a certain tokens as premium. The premium will be divided into two parts, one is to purchase cover from insurers, and the other will be used as a cover pool. Small claims will be paid from the cover pool and when the cover pool runs out, insurers will provide coverage. The remaining tokens in the cover pool will be returned to every community member.

The traditional P2P insurance still requires a centralized management and it may bring risks. In PalsGuard, we will build a decentralized P2P community and make the cover pool more secure. With the help of smart contract, we can also achieve automatic claim payment.



#### 4.3. SelfGuard – marketplace for personalized insurance

As InsurChain ecosystem evolves, we will launch a marketplace for personalized insurance to satisfy individual insurance demands. Users can post their own needs, no matter in structured form or unstructured form. Insurers on the chain will provide an estimation of the demand, including prices, expected profits and potential risks. Then every service provider on the chain can bid to become the underwriter for this demand. When a deal is made between user with needs and underwriter, InsurChain will record the deal and provide a smart contract to bind the deal. Insurers can also be an authoritative third party judge and provide opinions when disputes happen.

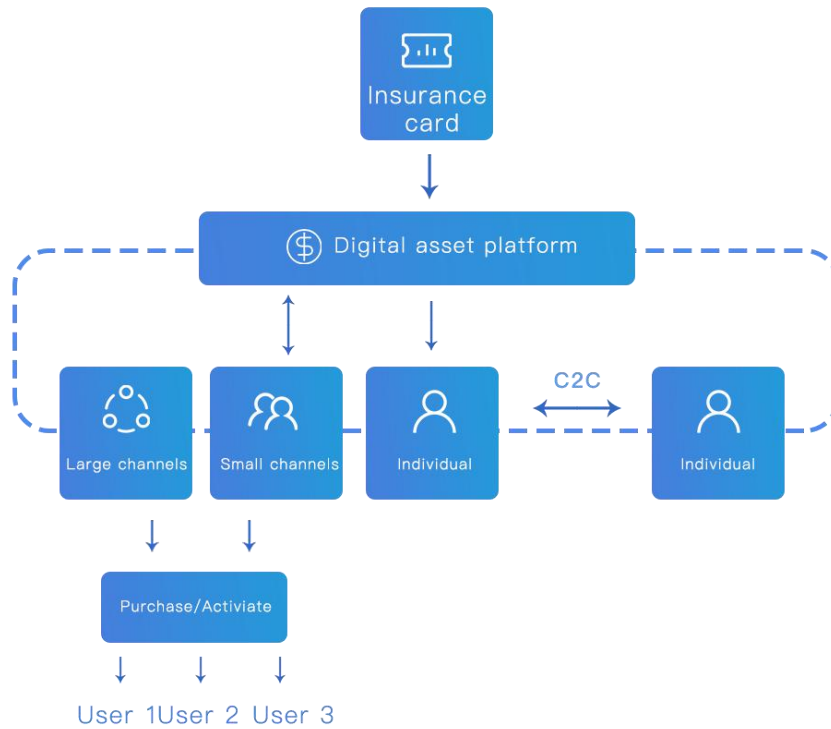


For example, meteorological index insurance is a policy that reimburses policyholders when a certain meteorological parameter, such as temperature, rainfall and snowfall. It is easy to implement, but insurers usually don't want to spend too many resources for this kind of policy.

However, SelfGuard can implement this policy on InsurChain and satisfy the needs for such policies. Users can spend InsurChainCoin tokens to purchase meteorological index policies such as high temperature insurance, smart contract oracles will monitor official temperature releases and when the predetermined temperature is reached, the claim will be automatically paid.

#### 4.4. Blockchain-based insurance cards

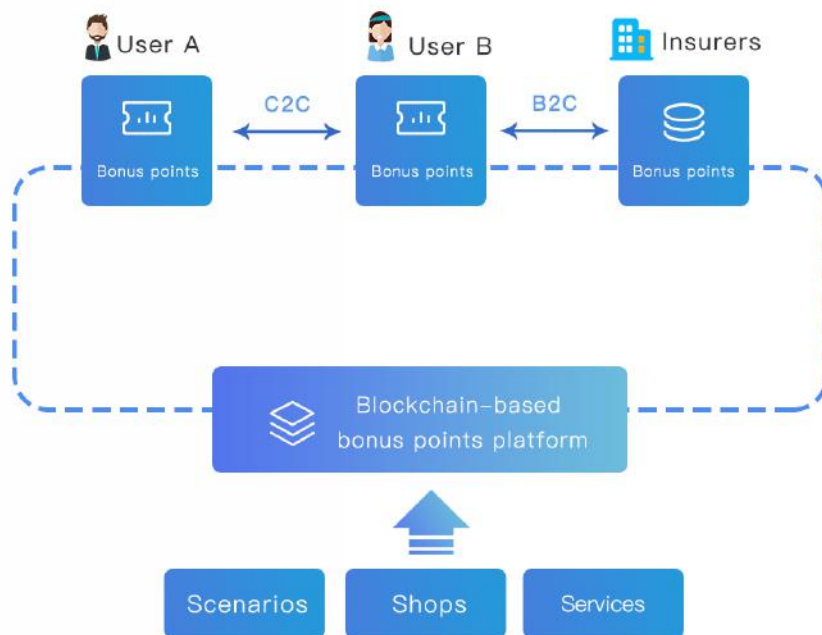




Insurance card is an invention on InsurChain, all the transactions can be traced on the chain and customers can use blockchain-based insurance cards to exchange policies. Therefore, everyone can be a distribution channel of a certain policy.

For example, insurers can put a flight policy on InsurChain, anyone who has purchased it can send it to other users on chain as a gift or at a certain price. Since all the transactions are recorded, when a claim is filed, insurers can easily verify the validity of the policy and process the claim payment quickly.

#### 4.5. Insurance blockchain points



Traditionally, insurers will issue bonus points when customer sign a new policy or renewal. Those bonus points can be used to buy things in their own platform or from a cooperated third party platform. However, most of the bonus points can only be used in a certain insurer’s platform.

InsurChain has designed a solution to solve this issue and make bonus points from different insurers exchangeable, therefore improving the liquidity of bonus points.

For example, an insurer wants to attract customers by offering bonus points, but they don’t have enough manpower to operate online markets, they can register on InsurChain and make their bonus points exchangeable with points from other insurers which can be used in many e-commercial stores. So, this insurer can attract more customers without extra cost to build an online markets.

## 5. Technical Structures

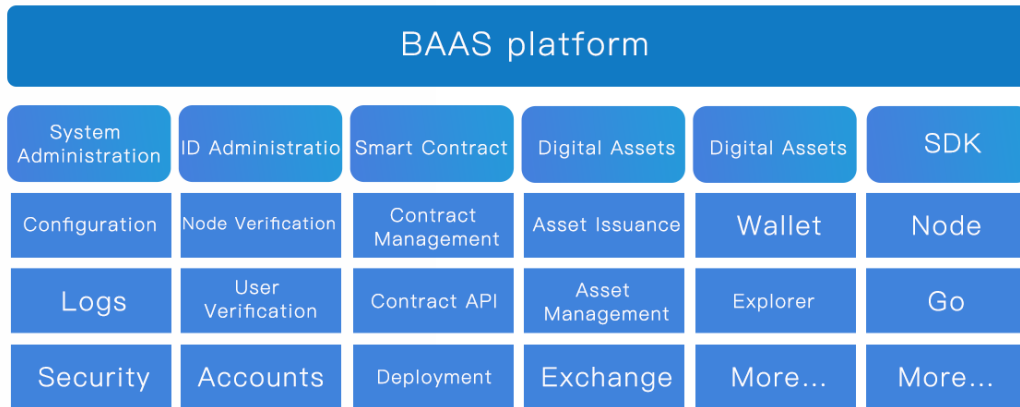
### 5.1. Basics

We will become the service provider of a business-level blockchain infrastructure and develop a series of blockchain-related products and services. On one hand, we will build an enterprise-level blockchain platform, on the other hand, we will develop high-scalable applications along with users.

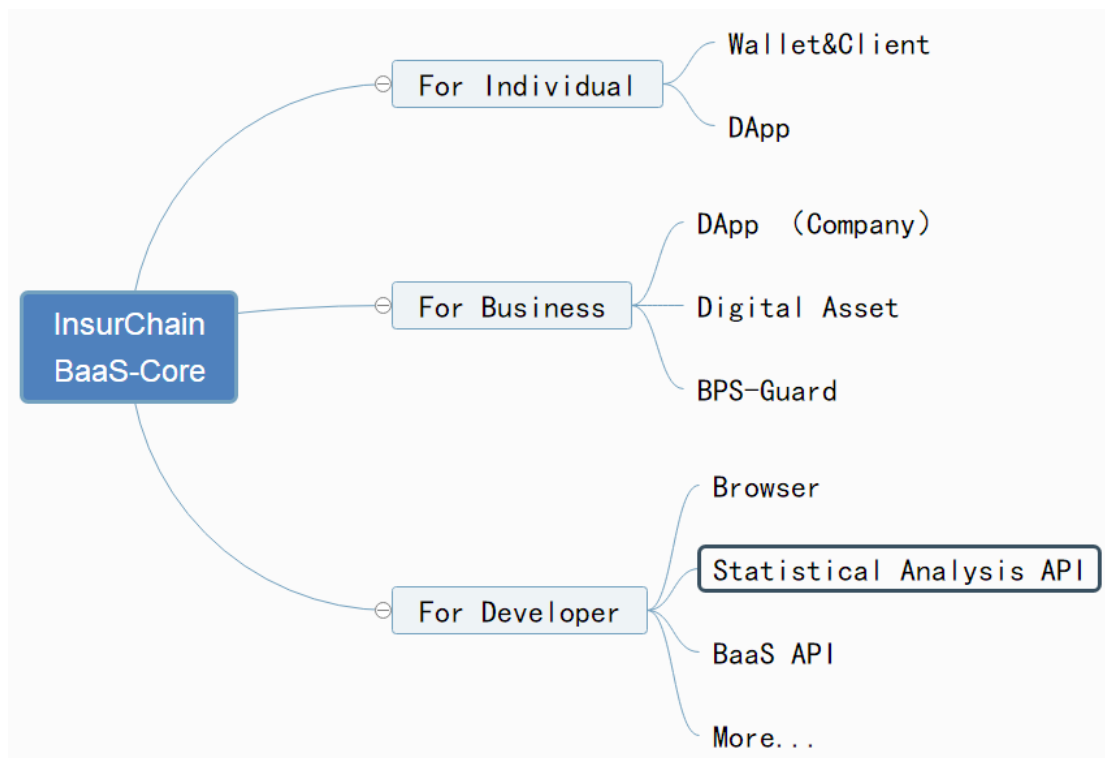
Technical details will be released in technical whitepaper in the recent future.

## 5.2. BaaS platform

We will develop a BaaS platform which will be a major advantage over other blockchain projects. BaaS is going to modularize each process of the blockchain system, including blockchain system, operating system and underlying hardware. User can participate in developing as well.



## 5.3 Application structure



## 6. InsurChainCoin

### 6.1. Purpose

InsurChainCoin(INSUR) is the crypto token within the InsurChain system. Users can spend a certain number of InsurChainCoins to get InsurChain services and products. The rate will be determined and charged by block recorder.

Other than that, InsurChainCoin is also a digital asset for users. They can spend it in claims, distribution and voting to get a better service. For example, when an insurers want to promote its policies, they can offer InsurChainCoin as reward for distribution channels.

InsurChainCoin's functions will be increasingly enriched when the whole InsurChain system grows.

InsurChain team will raise Ethereum and spend the Ethereum on the development, marketing and global operation of InsurChain. In early stages we will generate InsurChainCoin based on ERC20 protocol and put them into application. When the InsurChain blockchain is developed, we will migrate the whole system to our public blockchain.

### 6.2. Distribution of InsurChainCoin

We will issue 20 billion InsurChainCoin tokens. And the distribution plan is as follows:

8 billion InsurChainCoin tokens (40%) for investors;

2 billion InsurChainCoin tokens (10%) for cornerstone investors;

3 billion InsurChainCoin tokens (15%) for operation funds to support the community;

3 billion InsurChainCoin tokens (15%) for developers of InsurChain as rewards;

4 billion InsurChainCoin tokens (20%) for founding and developing team.

### 6.3. Administration of InsurChainCoin

Operation funds of InsurChain will be administered by a financial management team from InsurChain team. The financial management team will be in charge of operation expense and crypto currency management.

Operation expenses include salaries, travel expenses, rents and daily expenses.

Crypto currency management includes wallet management, transfers and exchange of digital assets.

## 7. Ecosystem

### 7.1. Global Ecosystem Development Initiative

We will build an International team to operate both in China and overseas. The initiative will encourage blockchain enthusiasts and developers to participate in InsurChain and work together to boost its development. Those who have made remarkable contributions to InsurChain will be rewarded with InsurChainCoin.

## **7.2. Synergetic development of insurance industry**

Operation funds will continuously encouraging industry partners to join and operate in InsurChain ecosystem. When InsurChain is filled with outstanding developers, major insurers and high quality users, we believe this decentralized network can help make insurance great once again.

In this ecosystem, everyone in the insurance can find its place. No matter it is insurers, users, data providers or other third party service providers.

## **8. Governance**

### **XLAB Foundation LTD.**

XLAB Foundation LTD. is a non-profit foundation organization founded in January, 2018 in Singapore. Singapore is a country with stable and sophisticated laws and financial environment. According to laws in Singapore, XLAB is founded to support events of public and private interests, and is not allowed to pursue business profits.

XLAB Foundation is founded to operate InsurChain and the purpose is not to make profits but to introduce disruptions for the industry. Operation fund will be managed by leaders in the InsurChain team. All the revenues earned will be allocate to cover operation expenses on InsurChain.

## **9. Team**

InsurChain team is made by senior officers and developers of insurance company, InsurTech investors and blockchain experts. All core members have over ten years' experience in insurance.

Yang Xuan, head of the InsurChain's Chinese district, is also the co-founder of Warp Speed Capital. Since WSC founded in 2015, it has been operating as a research-driven investment institution and focus exclusively on digital insurance. Mr. Yang is the first investor in China who systematically studies and invests in digital insurance and he is now known as the best investor in digital insurance in China.

Mr. Yang's team has surveyed and researched hundreds of insurance companies and InsurTech startups both domestically and internationally. They have sorted out all the patterns and features in the combination of insurance and technology. WSC has invested in various startups since 2015 and most of those invested startups have closed next round of funds and grown significantly within two years.

Warp Speed team, the strategic partner of InsurChain also offers media and community services for the digital insurance industry. InsurView is its media platform where 100,000 subscribers can learn the trending news from global InsurTech community. Warp Speed team also publishes two industry reports for digital insurance every year. And all these reports have offered great help for the InsurTech community.

Li pu, co-founder of the Chinese district, was VP of Taiping Insurance Beijing Branch and is founder of Footprint Interactive. He has been in insurance for more than 10 years and deeply understands the problems insurers are facing. He founded Footprint Interactive in 2016, which has become a service platform for over 500 thousand high-end insurance agents. He co-founded Warp Speed Fintech in 2017.

#### Core members

Yang Xuan

Head of the Chinese District

Founder of Warp Speed Capital

Director Manager at DreamShops

CTO at MyFamily

Li Pu

Co-founder of the Chinese District

Former VP at Taiping Insurance Beijing Branch

Founder of Footprint Interactive

FMBA at CUHK

Satou Yousuke

Former insurance executive

Expert of blockchain application in insurance

Wu Dong

Blockchain expert

Worked in Yahoo Research Center in China

Master of Computing at Tsinghua University

Xin Xianbao

Expert in digitalization solution for traditional insurers

Le Yifan

Former leader in Baidu News

Liu Xingxing

Former operational director at Taiping Insurance Beijing Branch

Xie xian

Big Data expert for insurance

Leader of Data Center at Taiping Insurance Beijing Branch

Advisory Board at InsurChain

Li Xiaolai - INBlockchain

Lin Jiapeng – Founder of LinkVC

Qi Ning – Founder of SF.GG, core contributor at Github

Lu Rongde – Founder of Coin900

Zhang Yijia – Founding member of Google Assistant, MSc of Computing at CMU

Robin Kiera – InsurTech thoughtleader, former board consultant at Allianz

Cornerstone Investors

INBlockchain

LinkVC

Star Chain Capital

Warp Speed Capital

Contract VC

SkyChee Capital

## 10. Timeline

The development of InsurChain is a combination of short-term construction and long-term improvement. With the increasing spread of blockchain and smart contract, we will implement the following strategies step by step.

The strategies here are only an overview of the whole plan. More detailed information will be released in our official website in the future.

### **Phase One** (May 2015 to Sep. 2017)

The InsurChain team has visited hundreds of insurance companies and tech startups in a dozen countries and regions and conducted thorough surveys about the global development of digital insurance and InsurTech. During this period, InsurChain team has released several well-received industry reports based on its surveys and invested in some promising InsurTech startups. Blockchain has also been brought up during this period and an idea of combing insurance and blockchain was being conceived.

### **Phase Two** (Sep. 2017 to Dec. 2017)

The InsurChain Program was formally launched. And we have secured cornerstone investment and private investments.

### **Phase Three** (Jan. 2018 to Aug. 2018)

We will launch the first application in InsurChain ecosystem, BizGuard. Users and developers from all over the world will be able to design and purchase insurance solutions in the ecosystem. Meanwhile, the InsurChain Blockchain program will be initiated.

### **Phase Four** (Sep. 2018 to Mar. 2019)

InsurChain Blockchain program will be widely applied in the ecosystem and SelfGuard and

PalsGuard will be launched. We are also going to provide interoperability for each program.

**Phase Five** (Apr. 2019 to Dec. 2019)

InsurChain ecosystem will be improved and refined, all processes including policy design, distribution and claims will be put in action.

## 11. Risk disclosure and disclaimer

### 11.1 Risk disclosure

#### **Systematic risk**

Systematic risk means those might cause fluctuations to all global markets. For example, policy risks, the regulations on blockchain projects and financings are not clear in most countries. So there is a chance investors and participants of the program being impacted by new regulations.

The blockchain markets also has potential risks. The digital assets may have been overvalued, investors may lose money or miss their expectations.

Systematic risks also include force majeure such as natural catastrophes, cyber-attacks and political turbulences.

#### **Compliance risks**

Digital assets have experienced and will continue to experience drastic fluctuations. Individual investors may suffer significant losses due to lack of experience. And since there is no regulation on this yet, investors may need to bear this risk.

#### **Regulation risks**

InsurChain is aiming to connect every one globally with insurance. However, since insurance regulations are different from country to country, the project might encounter hindrance in some areas. InsurChain will do its best to cooperate with local authorities, but the risks shall be recognized.

#### **Competition risks**

With an increasing number of players entering blockchain, the market is getting competitive. InsurChain need to stay the best to survive this competition. But the trend of future competition is still unclear.

#### **Team risks**

InsurChain team is comprised of senior investors, insurance officers and developers. Stability of the team is the cornerstone for InsurChain development. If a core staff leaves the team, it may impede the development of InsurChain.

#### **Security risks**



Cryptocurrencies is an anonymous digital asset. It can be attacked by hackers, be used in money laundering and be involved in criminal activities. InsurChain may face uncertainties in the future. Investors should be fully aware of that before participating.

## 11.2 Disclaimer

This whitepaper is only a reference for InsurChain and provide no suggestions on InsurChainCoin trade. Anyone who wish to trade InsurChainCoin should be fully aware of InsurChain ecosystem and trade on his own will.

InsurChain team guarantees the accuracy and authenticity of contents in this whitepaper and will be putting continuous efforts to improve the InsurChain ecosystem. Details of certain parts of ecosystem might change in order to improve InsurChain ecosystem.

Updates will be released on InsurChain official website ([www.insurchain.org](http://www.insurchain.org)).

InsurChain team is not responsible for losses investors suffer due to the following causes:

- A) Trade solely on the information provided in this whitepaper;
- B) Misunderstanding of the information in this whitepaper;
- C) Any behaviors result from this whitepaper.

InsurChainCoin is a token for the InsurChain ecosystem, it's an asset to exchange for functions in the ecosystem, not an investment-related asset. Possession of InsurChainCoin does not grant ownership, right of control or decision to InsurChain platform.

As a cryptocurrency, InsurChainCoin is not any of the following kind:

- A) Fiat currency;
- B) Security;
- C) Equity;
- D) Share, bond, bill or any other legal paper.

The price of InsurChainCoin shall be determined by the market and following applications. It may end up with nothing. InsurChain team promise nothing on InsurChainCoin price and will not be held responsible for the consequences caused by InsurChainCoin depreciation.