HeroChain

The World's First Legal Blockchain Network Interactive Entertainment Platform

White Paper V1.0

HeroChain Foundation

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Chapter 1 Market Analysis and Background Introduction

1.1 Global Interactive Entertainment Market Scale

There are already more than 100 countries and regions in the world to declare interactive entertainment legal. According to British bookmakers, the global interactive entertainment market is expected to be worth $536 billion in 2017. If all kinds of underground interactive entertainment markets are aggregated, the market size is estimated to be over a trillion dollars.

The U.S. interactive entertainment market scale is up to $166.2 billion, accounting for 30% of the global market, ranking the first.
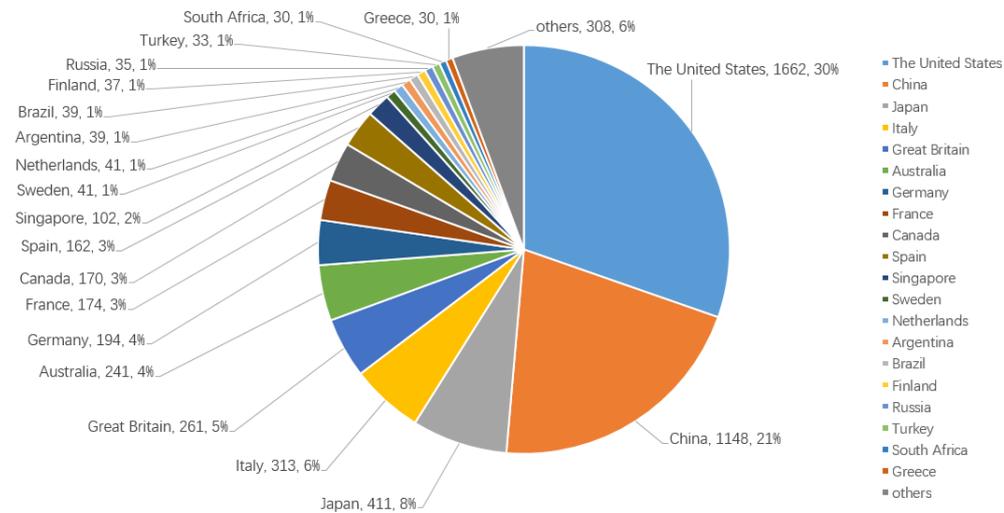
Figure 1: Global market scale forecast in 2017 and the top 20 countries in the global market

1.2 Global Online Interactive Gaming industry Market Analysis

There have been varying degrees of change in attitudes to online interactive entertainment in the world in recent years. As of 2016, 85 countries have legalized online interactive entertainment, creating tax revenues of about $37 billion.

Since 2017, a number of countries and regions have joined the legalization of online interactive entertainment operations, which offer high taxes to the government. This year, according to incomplete statistics, Jamaica, Colombia, Switzerland, Portugal, Poland, Romania, the United States, Massachusetts, Michigan, Pennsylvania will implement legalizing online interactive entertainment.

The global online interactive entertainment market is expected to grow at an annual rate of 11% by 2020, according to the research department.

In a country with a population of only about 50 million, which places great emphasis on cash transactions, it is expected that there will be seven online interactive entertainment license holders by the end of 2017 in Columbia, the

market value is forecast to be as high as $8 billion in the first year and the government hopes to generate $2.6 million in revenue in the first year through the online interactive entertainment market.

In the first five months of 2017, the state of New Jersey won more than $100 million in revenue from online bookmakers, which undoubtedly hankered after other states.

In Europe, UK online interactive entertainment has been experienced the fast growing, with about one in six adults participating in online interactive entertainment in 2016. There are over 18 million online interactive entertainment accounts throughout the United Kingdom and dozens of major online interactive entertainment sites. The numbers are gradually increasing.

The Italian government's tax revenue from online interactive entertainment was €247 million in 2016, an increase of more than 20% from 2015. The government is preparing to raise taxes on interactive entertainment bonuses above €500 from the current 6% to 10%.

Portugal has recently announced the legalization of online interactive entertainment. Online interactive entertainment companies with Portuguese license need to pay the government a variable ladder rate. A 15% tax rate is charged on websites with annual income of less than 5 million euros, with the increase in income, the tax rate is up to 30%. The Portuguese government has collected an average of 8% of the tax revenue from the initial 30 million euro interactive entertainment business. With the increase of betting, the proportion of the current average tax revenue has reached 16% of the total interactive entertainment business.

Chapter 2 Introduction of HeroChain Online Interactive Entertainment platform

2.1 Brief Introduction of HeroChain public chain platform

HeroChain is an interactive entertainment service ecosystem. It follows laws and regulations around the world to provide legal Interactive and entertainment around the world. At present, there are more than 100 countries and regions in the world that stipulate the legality of interactive gaming industry, both the market volume and the user base are very large, which provides a strong economic base and broad application prospects for the HeroChain public chain platform.

- Legal operation: The HeroChain online interactive entertainment platform will obtain a license to operate interactive entertainment operations legally in Cambodia.

- Development of the network: HeroChain is the first legal blockchain open online interactive entertainment platform. It is committed to using blockchain technology to help global users to participate in online interactive entertainment in a fair and transparent manner.

- Scientific and technological innovation: HeroChain also uses artificial intelligence and big data technology to further enhance the security, credibility and efficiency of the interactive entertainment market.

Based in legal states, Serving the World

Figure 2: The management idea of HeroChain public chain network interactive entertainment platform

The HeroChain public chain reconstructs the industrial structure by relying on the bottom technology of the blockchain and builds the application ecology. Based on the characteristics of blockchain decentralization, smart contracts, open-source code and transparent rules, the online interactive entertainment platform establishes the governance structure of HeroChain Public Chains

Foundation and Community Autonomy.

- On the one hand, all casinos, game manufacturers and interactive entertainment promoters holding legitimate interactive entertainment licenses in the world can implement various online entertainment scenarios and applications through APIs (Application Programming Interfaces) and SDKs (Software Development Kits) built by the HeroChain public chain;

- On the other hand, users around the world can freely and voluntarily participate in interactive entertainment or set up their own clubs in the HeroChain public chain in accordance with the laws and regulations of all regions.
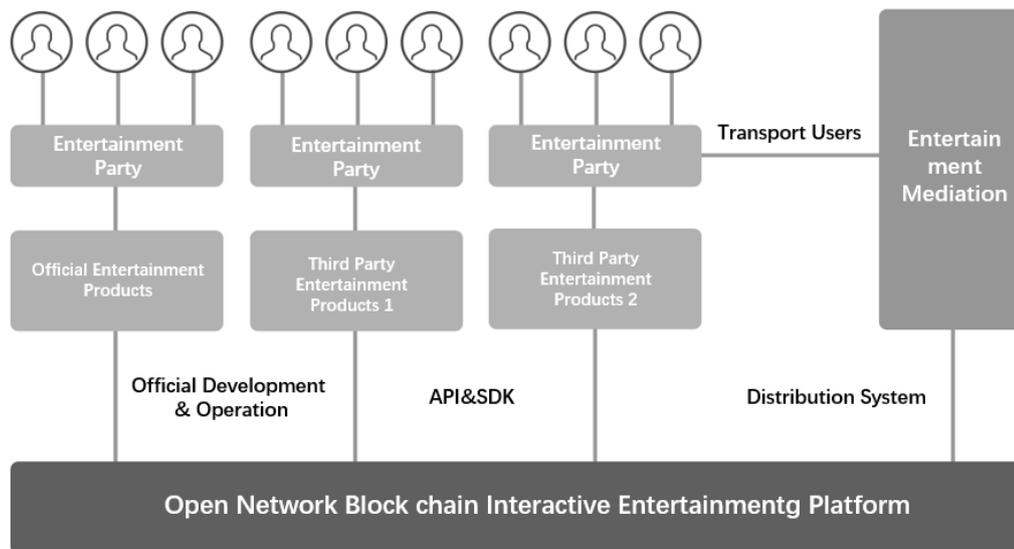
Figure 3: HeroChain public chain open blockchain network interactive entertainment platform

2.2 HeroChain public chain service system

- Network platform: HeroChain is based in Cambodia and focuses on the global online market. It is committed to building an all-dimensional and matrix system of online interactive entertainment services and building the underlying SDK based on the common chain. It will also provide customized client applications, including but not limited to PC, WAP station, APP (iOS & Android), PAD, H5, etc. The HeroChain will also support various OTC (C2C) interactive entertainment through underlying technology.

- Third party access: HeroChain will provide intelligent contract template and framework, application components, as well as customized API & SDK to reduce the threshold of online interactive entertainment game development for all the casinos, interactive entertainment vendors and other non-blockchain online interactive entertainment platforms that hold legal interactive entertainment licenses worldwide.

- Distribution network: HeroChain will provide smart distribution systems that comply with local laws and regulations, including user overview,

offline management, commission setting, financial ledger and other functions for interactive entertainment intermediaries around the world.

- Offline cooperation: HeroChain mainly provide online interactive entertainment services (i.e., online market). According to the needs of business development, we should develop the offline market by means of exchanging digital tokens for legal casino chips and cooperating with legal casinos.

- Asset exchange: Many users hold other mainstream digital assets (BTC, ETH, etc.). The exclusive wallet developed by HeroChain will integrate the digital asset exchange's trading interface to facilitate their quick participation in the Hero platform's entertainment activities. Users can quickly redeem the hero coin (real time exchange rate) through their wallets for online interactive entertainment, and the whole process is unperceived.
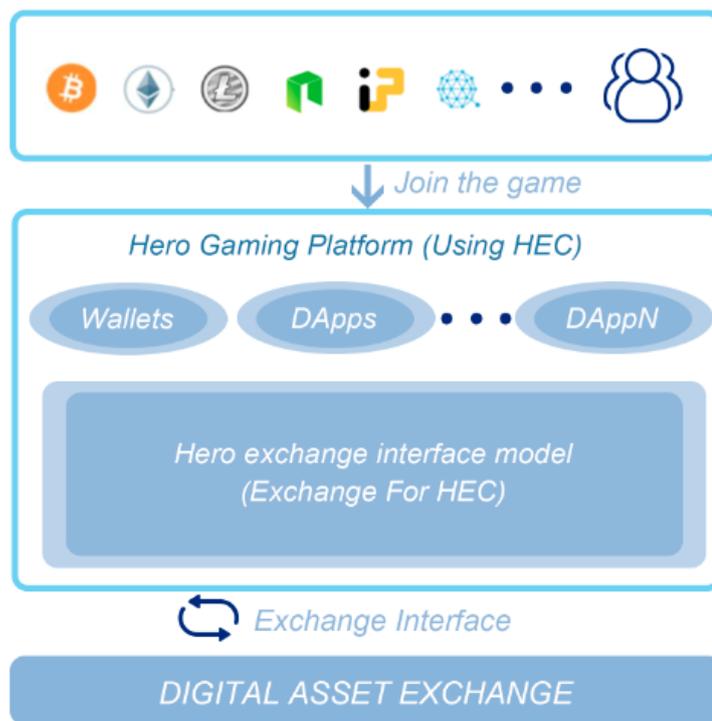
Figure 4: Service system of HeroChain

2.3 HeroChain public chain technology

HeroChain public chain allows developers to create any scalable, standardized, easily exploited and collaborative applications.

HeroChain public chain will be a universal global blockchain. Based on the bottom of the public chain, it has led to a new type of software application, a true decentralized betting application that embeds trust logic in applets and runs on blockchain.

At its lowest level, HeroChain is a multi-layered, crypto-based open source technology protocol whose various functional modules are fully integrated through design and, as a whole, it is a comprehensive platform for creating and deploying decentralized interactive entertainment applications.

At the same time, HeroChain also has a complete solution of intelligent contract. It is a general decentralization platform, and has a complete set of tools that can expand its functions. It implements public chains with the support of P2P network, encryption and HttpClient technology.

2.4 HeroChain public chain of other high-tech applications

In addition to the underlying technologies of the blockchain, the introduction of new high-tech technologies such as big data and artificial intelligence AI will inject new vitality and competitive advantages into the HeroChain public chain and greatly enhance the service level and efficiency of the HeroChain public chain service system.

2.4.1 HeroChain public chain and big data combination

Combination of big data and blockchain can both increase the value of data in blockchain and implement the prediction and analysis of big data in action. Both will be the footstone in the digital economy era.

- Risk control of interactive entertainment: It is not perfect to control risk only by using big data which still has problems of insufficient effectiveness such as data island, low quality data and data leakage, etc., resulting in continuous emergence of risk incident. Now data safety and integrity of blockchain technology is considered, because blockchain is a kind of unmanipulated, totally historical distributed database storage technology, it brings innovative application in risk control of interactive entertainment for integration of both technologies, application of blockchain technology to big data risk control system can effectively resolve data source problems of big data such as data island, low quality of data and data leakage. By using all data chains in blockchain to make prediction and analysis, the management or risk control department can find and prevent possible systematic risk in time so that they can better maintain the order and increase the efficiency of interactive entertainment market. So, decentralized characteristics of blockchain can eliminate information islands in big data risk control and perfect risk control by sharing information.

- Anti-cheating and anti-fraud in interactive entertainment: Various cheating conducts such as scalping, counterfeiting is the key ways of disturbing the interactive entertainment market. In order to prevent counterfeiting it is a perfect way to combine big data and blockchain technology: in blockchain, data is jointly recorded and stored by every trading node, and every node

can participate in data check and jointly provides evidence for the data, which improves realness of data. Because there is no center institute, a single node cannot add, delete or modify data at will, so the possibility of a single node creating wrong data is reduced. For example, establishment of a private chain inside a trading platform with one customer constituting one node, on one hand, can avoid central entering and storage of numerous data through a single information center and lowering operational risk; on the other hand, unilateral scalping and counterfeiting conducts can be contained through confirmation to ensure realness and validity of data. If counterfeited data can pass the confirmation of blockchain network, you must control above 50% computing capability of the private chain. When the node is enough, the cost of controlling the private chain rises dramatically. In addition, every node in the blockchain has complete data counterpart, only when whole blockchain system crashes can the data lose, and data record cannot be modified as soon as it is written in. So, blockchain features openness, transparence and safety, able to improve quality, enhance inspection capability of data.

- Credit system of interactive entertainment: Blockchain can dramatically lower credit cost. We used to maintain stability and infallibility of money credit through the approaches such as national law and weapon. If blockchain technology is used, due to its characteristics of infallibility and failure of double consumption, we can establish a credit very easily. In addition, there is an important criterion called separation of money and account in existing financial system. While in blockchain money and account are integrated, it achieves the goal through an interesting exquisite data architecture. Real-time balancing the books can be realized without post audit through blockchain.

- Basic expanded application: Aiming at the data of blockchain and application layer, HeroChain public chain will conduct deep application of big data. Blockchain can use IPFS to process numerous data, store corresponding encrypted Hash in blockchain and stamp time, without need of putting data on blockchain, not only saving network bandwidth of blockchain, but also effectively protection them. For safety of data, on one hand, they can be stored in IPFS after being encrypted; on the other hand, they can realize distributed sharing by using IPFS.

Deep analysis and cognition: Because blockchain data cannot be manipulated and can be stored for ever, HeroChain public chain can use the data of blockchain and on application layer, even integrate third-party data to establish related mathematic model, and conduct analysis and application of big data, including but not limited to user credit investigation, probability analysis, result prediction, interactive entertainment index, industrial report, etc. Based on manufacturer and user credit investigation, as well as probability statistics and prediction, it can further provide deep digital financial service such as micro-credit loans, insurance, etc.

2.4.2 HeroChain public chain and artificial intelligence combination

HeroChain public chain will be based on the combination of blockchain and big

data, in-depth application of Artificial Intelligence AI, including but not limited to smart customer service, intelligent assistant, personalized recommendation of interactive entertainment products (i.e., big data-based advertising service), etc., which allows the HeroChain public chain to serve the interactive entertainment market and users worldwide smarter, safer and more efficiently.

Chapter 3 The significance of HeroChain Online Interactive Entertainment Platform

3.1 Tax revenue growth for the interactive entertainment and travel industry

Revenue enhancement: Macau's casinos earn as much as 40% of tax revenue, while Cambodia's interactive entertainment revenue is only 5%. Therefore, Cambodia's online interactive entertainment platform theoretically can attract more users to participate in more taxes and attract more users through greater return rates.

Increase in tourism income: In 2016, Thailand banned interactive entertainment in full swing. Gamblers from neighboring countries in Southeast Asia flooded into Cambodia and once again pushed the interactive gaming industry in Cambodia to a new high.

3.2 More users and innovative experiences

The online interactive entertainment market includes both traditional online interactive entertainment, often referring to sites that provide betting services, APPs, live platforms and more. The global interactive entertainment platform based on blockchain is not only creating and emerging blockchain casinos, but also accepts digital currencies such as bitcoin BTC, Ethereum ETH, etc., and will bring more than 20 million digital currency players worldwide.

3.2.1 Traditional online gaming

1. Live casino gaming

Live casino dealers broadcast via live streaming video links. Players can participate in dealing, betting, the open, winning or losing, etc. Theoretically, it is possible to broadcast all offline casinos that dealers can participate in.

2. Electronic entertainment

Electronic entertainment includes video gaming games (such as slot machines and fruit machines). Electronic entertainment platforms include online chess and card gaming platforms, such as Texas Hold ' em poker and online mahjong games.

3. Online lottery

Online lottery platforms are provided with betting and lottery drawing services based on lottery results issued by national or licensed enterprises (such as welfare lottery and sports lottery).

4. Sports events

Online gaming platforms provide gaming services including eSports and sports competition (such as football and basketball). The platforms provide gaming

products based on game scores, winning or losing results, and specific /floating odds at a certain time so that users can bet online and wait for drawing results.

3.2.2 Blockchain casino play (gaming in the currency circle)

The current-stage application of blockchain casino gaming (gaming in the currency circle) is relatively simple. In addition, blockchain casino gaming offers fewer betting categories. It is usually a "Tai-Sai" game (The game is called playing with dice in the token circle).

Users can select any set with (two) numbers between 0.0001–99.9998 as a winning condition. (e.g., > 50.4999 < 50.4999) and bet on digital currency, such as BTC, ETH, etc. The system then produces a set of SHA256 hash values of the random seed of the server. Combined with the user's own random seed, the seeds of the two are combined and hashed to produce fair and random betting results. The result value judges whether the user wins and the corresponding digital currencies are returned according to the odds.

Due to mechanism similarity of the generation of dice's random numbers and the BTC address, bitcoin's private key undergoes a series of hash operations and finally generates the public key. This process is irreversible. Therefore, knowing the address of bitcoin cannot be reversed to the private key corresponding to the address. Similarly, it applies the same to the random number of dice games. Therefore, the fairness of the gaming results is guaranteed.

SatoshiDICE
SatoshiDice.com

vDice
vdice.io

Just-Dice.com
just-dice.com

1. Type	1. Type
On-Chain (OC for short): Players send a certain stake of BTC (or ETH) to the designated receipt address, and certain profits will be returned to users after winning.	Off-Chain (FC for short): It is necessary to recharge a certain amount of bitcoins to the website at first. Most of them were kept in a cold wallet, of which the address was open to the public and supervised. A small portion is kept in a hot wallet to deal with a large number of players' deposits andwithdrawals.
2. Advantages	2. Advantages
Anti-DDoS since it is OC No need to pledge a lot of money on the site.	You can bet fast and play cool since it is FC. No need to pay high commission fees and House Edge (A bookmaker's commission) is reduced to 1%. The essence lies in the fact that the bookmaker's return is unchanged and players have the highest win

	percentage.
3. Disadvantages	3. Disadvantages
The bet is slow since it is OC. House Edge (A bookmaker's commission) is 1.98%, a substantial part of which is to pay high fees to bet quickly and obtain transaction approval of the entire network.	The security requirements for the network will be higher.

Figure 5: Blockchain casino play (gaming in the currency circle)

3.3 The painpoints of Blockchain in solving the problem of interactive gaming industry

Blockchain has extraordinary significance for the entire interactive gaming industry. On the whole, HeroChain public chain blockchain attributes is across the era and cross-border for the interactive gaming industry's main meaning:

❖ Open and transparent, and unmodifiable: Blockchain technology can protect the openness and transparency of information of the interactive entertainment participants (wallet address), interactive entertainment rules, stakes, gamble results, etc. HeroChain public chain has changed the bad habits such as fraud and embezzlement, and solved the pain points of casino, online interactive entertainment platform and interactive entertainment group. At the same time, based on a completely open and transparent environment and open oversight, HeroChain public chain can also reshape the interactive gaming industry's trust system, enhance the participants' contractual spirit, and maintain a good platform order.

❖ Intelligent contract delivery: Through the implementation of various interactive entertainment scenes and different complexity of bets through customized intelligent contracts, HeroChain public chain eliminates the risk of default between lottery participants, and ensures the interests of all parties to be deducted or arrived in a safe, timely and unimpeded way. The default smart contract also enables long-term bets and long-term bet delivery. Once the trigger conditions are reached, the smart contract will be executed directly or provide evidence.

❖ Encryption to protect: Wallet address (on behalf of interactive entertainment participants), digital chips and other chain block data encryption features, can effectively protect the information security of all interactive entertainment users (especially meet the high-end VIP customer privacy requirements), improve the platform's reputation, and enhance the level of service platform and reputation.

❖ Get rid of the traditional regional restrictions: Users can bet anywhere on

the HeroChain public network's online casino platform (collectively, in-market casino), and can also use the digital chips by the blockchain purse to carry out the C2C OTC casino interactive entertainment, which enables people around the world to participate in interactive entertainment and entertainment anywhere and anytime using geographic fragmentation.

3.4 The significance of big data to the gaming industry

HeroChain public chain actively introduces big data technology, and can greatly improve the service quality and efficiency of the interactive gaming industry. In general, the main significance of big data for interactive gaming industry is as follows:

❖ The essence of the interactive gaming industry is mathematics. Probabilistic analysis of various factors is especially important for non-random interactive entertainment products, and big data provides full and accurate probability analysis.

❖ Whether casinos, game makers or users can dynamically adjust the odds and bet amount at any time according to the big data service provided by HeroChain public chain, and ensure the maximization of their interests with big data.

❖ Big data can achieve multi-dimensional user portrait. On the one hand, HeroChain public chain can help casinos, game manufacturers and platforms to optimize user service strategies, such as promotion based on user geography, habits and preferences, personalized recommendation of lottery products, etc. On the other hand, HeroChain public chain can provide microfinance, insurance and other deep digital financial services based on user credit, probability and statistics, to better provide users with services.

❖ Through the long term statistics and analysis of historical data, it can form big data achievements such as interactive entertainment index, industry report and so on, providing the theoretical foundation and data model for the sustained and healthy development of global interactive gaming industry.

3.5 The significance of artificial intelligence for the interactive gaming industry

Combined with the large data and machine learning of the platform, the HeroChain public chain can make a qualitative leap to the service quality of the interactive gaming industry by using the artificial intelligence AI technology, which greatly improves the intelligence, security and efficiency of network interactive entertainment. In general, the main significance of artificial intelligence to interactive gaming industry are as follows:

❖ The application of artificial intelligence in customer service can deeply analyze user's habits and try to figure out the user's intention to carry out more personalized customer service while saving manpower cost for the platform.

❖ Applying AI in the stimulation of emulational dealer and wash coder, which cannot only provide more comfortable service in the process of entertainment, but also dissuade users' addicts and irrational bets in time.

❖ AI's application in the Internet of things, smart city and other aspects can also help offline casino, industry and even countries to improve service quality and technology level, such as face recognition, intelligent payment, etc.

❖ Artificial intelligence and big data-based machine learning can help users to carry out high-load data analysis and forecast results, which cannot only effectively save the user's time, but also improve the accuracy of judgment.

❖ Based on the function of "smart betting small secretary" of artificial intelligence, automatic analysis of probability improves user's probability of winning (payment function).

3.6 The significance of the HeroChain public chain for Cambodia

Based on the HeroChain public chain, CIEP (Cambodia Interactive Entertainment Platform), the first online interactive entertainment platform to legally obtain local legal interactive entertainment licenses in Cambodia, the first online interactive entertainment platform CIEP (Cambodia Interactive Entertainment Platform) will be created in accordance with the law of the local legal interactive entertainment license in Cambodia. The online interactive entertainment platform, based on the business philosophy of "based on Cambodia and serving the whole world", has far-reaching significance for Cambodia's interactive gaming industry and even the national economy. It is manifested in the following aspects.

❖ With HeroChain, a licensed online interactive entertainment platform can help Cambodia's interactive gaming industry develop global audiences and increase the worldwide competitiveness and market share of the interactive gaming industry in Cambodia, without taking offline resources in Cambodia.

❖ With HeroChain, a licensed online casino platform that enables global users to participate in Cambodian online interactive entertainment with fragmented time anytime and anywhere. It can greatly increase the total amount of rolling chip (technical term, referring to amount of bet circulation). On the one hand, it has directly increased the revenue of the interactive gaming industry in Cambodia. On the other hand, the influx of global users, funds and resources has greatly enhanced the market vitality of the regional economy in Cambodia.

❖ HeroChain will analyze the data of the global interactive entertainment market and make use of the characteristics of blockchain, such as no tampering, permanent preservation and querying at any time, so as to provide scientific and effective data support for Kampuchea's industry development prediction and industrial policy adjustment.

❖ HeroChain is based on the application of HeroChain in the Internet, blockchain, smart contracts, big data, artificial intelligence and other technologies. On the one hand, it can greatly enhance the service level of the interactive gaming industry in Cambodia, bringing new business models and wealth creation thinking. On the other hand, it has played a positive role in promoting and popularizing emerging scientific and technological achievements in Cambodia, such as statutory digital currency, digital financial upgrading and artificial intelligence applications.

Chapter 4 Extension Business of HeroChain blockchain

4.1 Cooperation with the legal global interactive entertainment market

Based on the principle of legality, the HeroChain team will actively expand cooperation with local governments, licensed enterprises and game manufacturers. In the case of the casino, the mode of cooperation is mainly divided into the following types from the shallower to the deeper:

❖ Access to interactive entertainment products, licensed casinos can carry high quality interactive entertainment products to the HeroChain public chain platform independently.

❖ Get through exchange of chips, offline casinos can unlock exchanges with HeroChain official chips, allowing them to redeem their offline chips with official chips or allowing users to use their official chips directly to their offline betting.

❖ Issue digital chips, HeroChain public chain team can help casinos issue proprietary encrypted digital chips; on the one hand, it can help offline casinos expand their online presence, especially young players with high quality and high net worth. On the other hand, digital chips can make customers no longer limited to offline casino or even centralized Internet applications. Customers can also organize their own OTC interactive entertainment on the sidelines, which allows the offline casino to expand passenger sources and improve profitability without increasing operating costs under the line.

❖ Completion of technical upgrading, HeroChain Public Chain Team can help offline casinos customize their online interactive entertainment platforms while further improving their service quality and operating costs with new technologies such as blockchain, smart contracts, big data and AI.

4.2 Build a digital chip exchange and trading platform

Digital chip exchange: Exclusive digital chips for large casinos, interactive entertainment platforms and game vendors as well as digital assets issued for the underlying property rights of the superscript interactive gaming industry and its ancillary industries. When business development requires, HeroChain Public Chain will develop and operate or co-operate a digital asset trading platform that provides a channel for redemption, transfer and realization of a variety of digital chips.

Digital currency exchange: The platform may also offer trading services in the world's top-ranked, well-performing digital currencies such as BTC, ETH, etc.
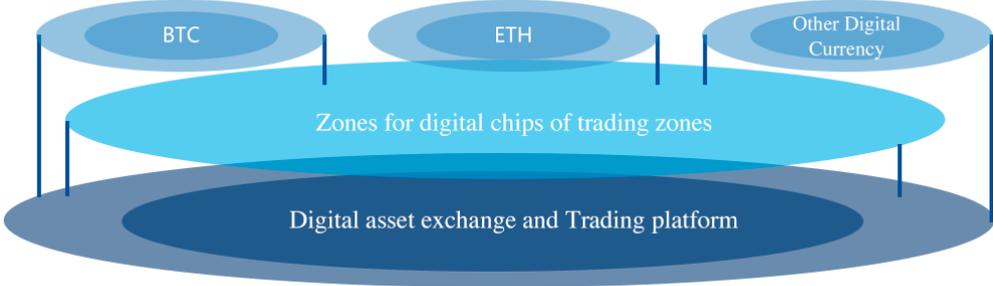
Figure 5: Digital chip exchange and trading platform

Chapter 5 Infrastructure of HeroChain

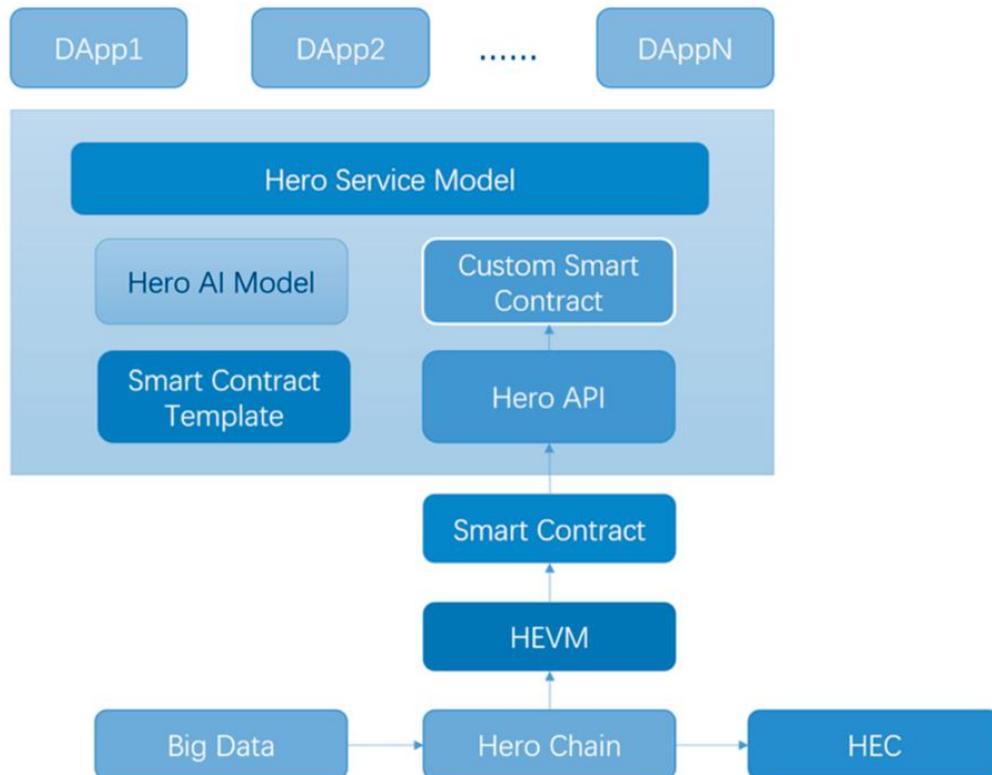HeroChain builds a smart contract system and service application. The basic framework is as follows:

Figure 6: HeroChain framework

5.1 The bottom of the public chain- Token

HeroChain public chain issued exchange Token.

5.2 Big data and AI layer

The underlying big data provides a variety of data support for the upper interactive entertainment applications; the AI layer provides a series of auxiliary functions of the upper application, such as smart betting, smart identification, etc.

5.3 Smart Contract layer

Based on the smart contract layer of the HeroChain public chain, a variety of smart contract templates are customized according to the interactive entertainment business scenario. Meanwhile, a smart contract API is provided,

and a development kit for custom smart contract application is provided.

5.4 Service layer

In addition to the HeroChain public chain betting platform, the casino industry and its ancillary industries are all backed by the HeroChain public chain to assist in grafting their own distributed application - DAPPs, HeroChain public chain provides a series of underlying data access and interaction interfaces based on multiple languages to improve the service capabilities of HeroChain public chain service system, including targeted service interfaces such as registration certificate, transaction record, ownership certificate and data query engine, it also supports multilingual integration and functional extension.

Chapter 6 Governance Structure of HeroChain

6.1 Establish of the HeroChain foundation

Considering the internationalization of the HeroChain public chain, the HeroChain Foundation (" Foundation ") is a BVI company established overseas. The foundation is committed to the development and construction of HeroChain open blockchain online interactive entertainment platform. It advocates transparent governance, so as to promote the safe and harmonious development of open source ecological society.

6.2 Governance structure of HeroChain foundation

The HeroChain foundation governance framework includes operational processes and rules for routine work and special situations. The HeroChain foundation organization structure is shown below.
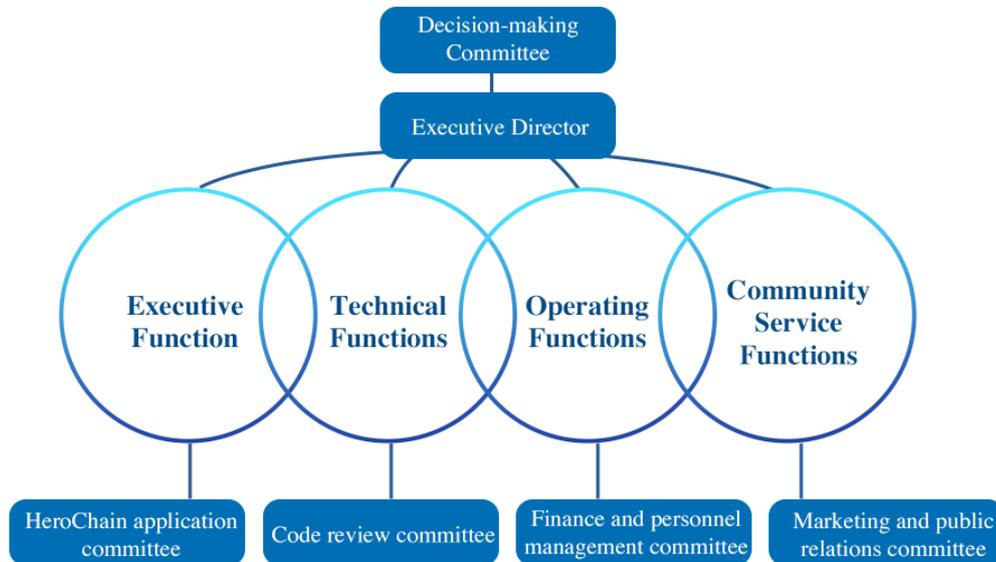
Figure 7: Structure of the HeroChain foundation organization

The first HeroChain foundation decision-making committee consists of five core founding members, serving four years. The core founding members have rich experience in the area of blockchain. After full term, the community will select 50 community representatives based on the ownership of the HeroChain digital assets and the weight of the asset age, and then the final election will produce five members of the decision-making committee.

6.3 HeroChain transaction security and audit

Transaction security:

HeroChain ensures user account and fund security through blockchain consensus, smart contract and other technologies such as digital signature, end user encryption wallet and other security means.

HeroChain provides highly efficient integration of financial security data storage, network, platform and other resources. It integrates data, applications and transactions into the cloud of blockchain and builds a secure trading network environment.

It builds security deals with the most trusted trading platforms and technology experts.

Audit:

The HeroChain public chain foundation Investment Commission will maintain a high standard of good faith and moral standards of business behavior;

Abide by the relevant laws and regulations and industry self-discipline principle;

HeroChain will invite internationally renowned third-party audit institutions to conduct regular audits and assessments of the HeroChain foundation's fund use, cost expenditure and profit distribution.

HeroChain will have no reservations about publishing third-party evaluation and audit results.

Chapter 7 HeroChain Core Founding Team

Name / Title	Introduction
Vincent HeroChain Co-Sponsor / Executive Director	Vincent is the master of Applied Finance, Macquarie University, Australia. He has many years' experience in commodity trading in Europe and US, and maintains good cooperation with multinational securities markets. He initiated and constructed the strategic concept of HeroChain, and is determined to create an online fair entertainment game based on blockchain technology. His vision is to take Cambodia as the origin to promote to the world, eliminate network fraud, and purify network games.
Silver, Ge HeroChain Sponsor	Silver Ge is General Manager of DGS Group Limited. He has a wealth of experience in investment. He has accumulated a rich experience in the market, customer resources, social relations, government and funding sources. In view of applied finance, he holds a unique view of choosing investment objectives and financing of investment projects.
Lam Un Leng HeroChain Cosponsor	Lam Un Leng is the President of Energy Development Consulting Co., Ltd. As a senior professional in operations management, he has extensive practical experience in lean management and lean production theory. He has been providing consulting services to several large companies including reducing costs, improving quality and services, and building sustainable competitive advantage.
Yu Xigang HeroChain R&D Director	Yu Xigang graduated from Tsinghua University with a master degree in computer science. As the R&D director (System Architect), he has 20 years of experience in software development, including 10 years of experience in the financial and securities industry. He has been mainly engaged in the R&D of the quantitative trading system and development of digital currency and blockchain technology. He has served for Motorola, Microsoft, Shihua International Finance, and Shanghai New Lido as a senior engineer and a strategic analyst.
Xiang Xu HeroChain System	Xiang Xu got a bachelor in software engineering from China University of Geosciences. He is engaged in

Architect	system architecture design (good at big data processing, analysis and trading, blockchain, IoT, etc.) and software development (C/C++, Golang, JAVA, HTML/HTML5, JS, Python, Android, etc.) He has been involved in major projects such as Zhongguancun data exchange platform, China telecom's sky wing acceleration project, and intelligent building solutions based on the IEEE1888 agreement.

Chapter 8 Official Digital Chip HEC

8.1 Introduction of Digital Chip HEC

The HEC, named Hero Coin, is the original encrypted digital token issued by HeroChain, with dual attributes. On the one hand, the digital chip HEC is the voucher for sharing the proceeds of the HeroChain public chain project; on the other hand, the digital chip HEC is the only official designated chip betting code on the HeroChain public network.
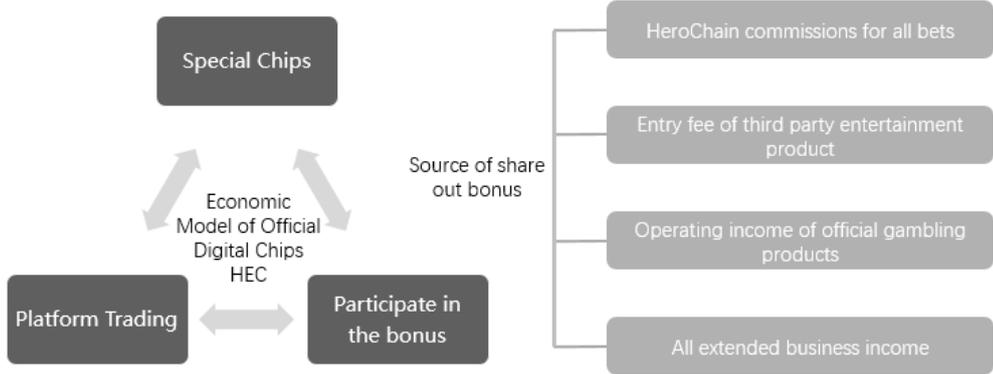

Figure 8: Economic model and dividend source of official digital chips - HEC

The digital chip, HEC, issued a total of 5 billion pieces, created by the HeroChain public chain, the total amount limit has been set, cannot be changed, will never be reissued. The digital chip HEC is distributed to different holders according to certain rules and proportions. A certain proportion of the digital chip HEC are used for fund-raising from right people in an appropriately way. The purpose is to construct blockchain underlying layer, develop product modules, implement layout of application ecology, and maintain operation of HeroChain public chain.

Digital chips HEC holders can participate in voting to generate bookkeeping, and can also participate in the decisions of the foundation and the HeroChain online interactive entertainment platform.

8.2 Allocation plan of the official digital chip HEC

Proportion	Quantity	Allocation Plan	Remarks
50%	2.5 billion	Sell to the people in a proper way.	Used for the operation of HeroChain public chain foundation; mainly include development, market, operation, third-party service, etc.
30%	1.5 billion	Founding team Developing team	Used to reward the teams that have made efforts and contributions in the construction

		Consultant team	and development of the HeroChain public chain; express gratitude for their support of HeroChain public chain community project by means of human resources, technology development, and community construction. Tokens will be locked within one year and cannot be circulated. Tokens will be released in a monthly linear mode within two years after the lock-up period ends.
9%	450 million	Market promotion Business distribution	Business distribution in the process of seeking resource integration, equity exchange, and community support, Also used for technical exchanges to support project promotion and platform improvement.
5%	250 million	HeroChain Public chain community	The system will release 5% of tokens to all HEC group holders in 50 months by releasing 10 million each month. (The specific distribution is based on the currency amount snapshots of holders at a certain time of the month).
5%	2.5 亿 250 million	Luck value incentives	The system will withhold 5% and release 10 million in 50 months. The system assigns the luck value incentives to the top 10 users that match the most according to the random hash value of the specified block height. (If holder accounts' daily average value of the current month is more than 500,000 HEC can participate in luck value incentives.) (The distribution is based on the Tianheng formula.)
1%	50 Million	Free gifts	According to big data analysis, the system will smart "airdrop"

			heavy digital currency players through the Ethereum wallet, motivating them to follow and invest in the HeroChain public chain community project.

8.3 Sales plan of the official digital token HEC

Digital token HEC will be sold to the right people in an appropriate manner in strict accordance with laws and regulations around the world. HEC's constant issue amount is 5 billion, of which 50% (2.5 billion) is used for external sale. Specific fund raising ratios and the method are as follows:

	Angel Round	**Seed Round**	**The First Tranche of the Private Placement**	**The Second Tranche of the Private Placement**
Time	1 Day	2 Days	3 Days	4 Days
ETH	1 : 16,000 （ 6,000 ETH）	1 : 14,000 （28,000ETH）	1 : 12,500 （ 86,000 ETH）	1 : 9,000 （Hard top 30,000 ETH）
IPT	1 : 2 （2 Million）	1 : 1.6 （5 Million）	1 : 1.25 （10 Million）	
Note	Locked position for 3 months	Locked position for 1 month	No locked position	No locked position

Hard top: 150,000 ETH

8.4 Profit model and dividend distribution of HeroChain

8.4.1 Profit model of HeroChain

Overall, HeroChain public chain is a very profitable blockchain application platform, all of the HeroChain public chains mentioned in this white paper are the main source of revenue and extended business:

- HeroChain will draw a certain percentage of commissions from all interactive entertainment games;

- HeroChain will charge a certain amount of platform entry fees from all or part of the interactive entertainment product suppliers

- The revenue that the HeroChain develops and runs the interactive entertainment product officially and independently;

- The revenue of HeroChain from all extended and other businesses.

8.4.2 Dividend distribution of HeroChain

Based on the continuous, healthy and rapid development of HeroChain public chain project, the HeroChain Foundation will pay the regular dividends with 20% from the total net profit of the project according to the annual financial statements.

The HeroChain public chain project will pay dividends after the annual financial results are announced. The basis of the dividend is to sum up the holding volume of the official HEC and then issue the dividends to the holder of the HEC on average. The HeroChain Foundation will publish the registration time T (in milliseconds) of the HEC holding volume simultaneously when they issue the dividends plan. The HEC holding volume at time T will be as the basis for the dividends.

The dividend method of the HeroChain public chain will be paid out in the form of main digital currency based on the local laws and regulations of Cambodia or according to international practice. The specific method is:

The HeroChain Foundation will select and publish the prevailing currency used for the dividend in advance, and they are usually the international mainstream digital currencies such as ETH, BTC, etc. The corresponding dividend will be returned to the wallet address of this currency of the user in the published currency.

After HEC logs in to the digital asset trading platform, the issuer will repurchase HEC by a certain percentage at the end of each quarter. For repurchase of HEC, 50% will be sealed, and the other 50% join the lucky value incentive token pool for payment.

Chapter 9 HeroChain Execution Plan

Time	Planning
Oct 2017	To complete market and industry research, as well as the integration of key resources
Nov 2017	To determine HeroChain's business model and complete negotiations on key business cooperation
Dec 2017 - Jan 2018	To create the digital chip HEC based on the HeroChain at one time and hold the road shows and promotional activities so as to distribute the available digital chips HEC to the appropriate crowd in the right way.
Dec 2017 - Jan 2018	International Summit Forum of Blockchain & Digital Economy, Phnom Penh, Cambodia
Jan - Mar 2018	To complete the on-line transactions of the digital chip HEC in the first trading platform from where the market value of digital chip HEC can be managed constantly and effectively and the relative information can be disclosed timely and accurately so as to have the irregular non-fixed dividend or flexible dividend.
May 2018	To complete the development of customized smart contract and the first interactive entertainment products on-line of HeroChain
Jun 2018	To complete the overall development and on-line of the open and blockchain network interactive entertainment platform
Aug 2018	To complete the full online on the main client side of HeroChain.
Oct 2018	To complete the HEC's online transactions on 5 major trading platforms and several non-mainstream trading platforms as well as the global layout of HEC.
Dec 2018	To continue to optimize HeroChain's products, services, profitability, and ensure the continuous increase of the market value of digital chips HEC steadily with the continuous management of market value and information disclosure

Chapter 10 Legal Affairs and Risk Statement

10.1 Legal Structure of HeroChain Public Chain

For the HeroChain public chain project, an overseas BVI company, the HeroChain public chain Foundation, will be set up. The foundation will serve as an independent legal entity, and is fully responsible for organizing teams to develop, promote and operate HeroChain public chain projects and undertake all related responsibilities.

HeroChain Public Chains Foundation will strictly follow the Cambodian laws and regulations, the right way for the right people for sale digital chips HEC. Any legally restricted national citizen or group will not be allowed to participate in the sale or sale of digital chips HEC, so HeroChain Public Chains Foundation will not sell digital chips HEC to the aforementioned target. (Special note: This item does not sell digital chips for China and the United States).

The digital chip HEC is the official digital chip which is officially designated by the user when it participates in interactive entertainment on the HeroChain public chain platform, as well as the measurement basis for participating in the dividend. HEC will not sell digital chips once any commitment to repurchase or redemption of it.

The digital chip HEC, as a virtual commodity of practical use, is not a securities, nor a speculative investment tool. In addition to Digital Chips HEC, which is the official designated chip redemption and entitlement distribution for the HeroChain Public Chains Platform, Digital Chips HEC does not represent any real-world assets or rights (such as the shares of HeroChain Public Chains Foundation, voting rights, etc.)

HeroChain public Chain Foundation's income in the sale of digital chips HEC will be mainly used by HeroChain public chain foundation for technology development, marketing, community building, financial audit, business cooperation and other purposes.

HeroChain public chain is a completely open interactive entertainment platform built on the public chain. HeroChain public chain is still likely to be questioned and supervised by competent authorities in different countries all over the world. In order to meet and comply with local laws and regulations, the HeroChain public chain platform may not provide normal services in some areas.

10.2 Disclaimer

In addition to what is clearly stated in the white paper, the HeroChain public chain foundation does not make any representations or guarantees to HeroChain public chain or digital chips HEC (especially its marketability and specific functions). Anyone who participates in the sale plan of digital chip HEC and the purchase of digital chip HEC is based on its own knowledge, laws and

regulations and the white paper information of HeroChain public chain and digital chip HEC. Without damaging the universality of the foregoing content, all participants will receive the digital chip HEC according to the current situation after the initiation of the HeroChain public chain project, regardless of its specifications, parameters, performance or functions.

HeroChain Public Chains Foundation hereby expressly disclaims and refuses to accept the following responsibilities:

a) Anyone who violates the anti-money-laundering, anti-terrorist financing or other regulatory requirements of any country in the purchase of digital chips HEC;

b) Anyone who purchases digital chips HEC violates any statement, warranty, obligation, promise or other requirement stipulated in the white paper, and resulting HEC cannot be used or cannot be extracted.

c) Due to any reason, the sale of digital chips HEC plan is abandoned;

d) The failure or abandonment of the development of the HeroChain public chain, and the resulting inability to deliver or not use the digital chip HEC;

e) The postponement or extension of the development of the Hero Chains public chain, and the consequent inability to reach a prior disclosure schedule;

f) HeroChain public chain and its digital chips HEC source code errors, defects, faults or other problems;

g) HeroChain public chain platform, digital chips HEC failure, crash, paralysis, rollback or hard bifurcations;

h) HeroChain public chain or digital chip HEC failed to achieve any specific function or is not suitable for any particular purpose;

i) Use of funds raised from digital chips HEC sales program;

j) Failure to disclose timely and complete information about the development of the HeroChain public chain;

k) Any participant disclosed, lost or destroyed the digital chip HEC's wallet private key;

l) The third party distribution platform of digital chips, such as breach of contract, violation, infringement, collapse, paralysis, termination or suspension of service, fraud, misoperation, misconduct, mistake, negligence, bankruptcy, liquidation, dissolution or closure of the HEC distribution platform.

m) Any difference, conflict, or contradiction between the content of the agreement between anyone and the third party distribution platform and the content of this white paper;

n) Any person's transaction or speculation on the digital chip HEC;

o) The listing, suspension, or delisting of digital chip HEC on any trading platform;

p) Digital chips, HEC, are classified or regarded as a kind of money, securities, commercial bills, negotiable instruments, investment goods or other things by any government, quasi government agencies, competent authorities or public institutions, so that they are prohibited, supervised or restricted by law;

q) Any risk factors disclosed in the white paper, as well as those related to the risk factors, cause or concomitant damages, losses, claims, liabilities, penalties, costs or other negative effects.

r) After careful consideration, we decide to not accept the participation of citizens/residents of the United States and mainland China in the subscription crowdfunding.