



portal

BLOCKCHAIN-BASED VIRTUAL REALITY ECOSYSTEM

# White paper

portal

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## VISION

Virtual reality will be the ultimate form of the Internet.

Many giants, including Google, Facebook and Microsoft, believe that instead of PCs and smart phones, virtual reality will become the next generation of the universal computing platform.

Portal is one such super innovation project that has arisen under this opportunity: it aims to build a decentralized virtual reality ecosystem based on both virtual reality technology and blockchain technology.

The Portal team is composed of top experts in the fields of virtual reality, Internet, finance, blockchain, information security and the like.

Portal is a project that has been established and promoted. The Portal team is determined to upgrade Internet messaging by building a virtual reality ecosystem, thus profoundly improving people's daily life, including information communication, culture and entertainment, social interaction, shopping, work and study, as well as medical treatment and health, so as to accelerate the arrival of the future. The project team is now conducting in-depth research and exploration of virtual reality and blockchain technologies, and has successfully applied these technologies to industries such as culture and entertainment, sports event, tourism and others. The business model and exploration results of the Portal project have been widely recognized.

Now, you are invited to join us in building the decentralized virtual reality ecosystem together.

**Keywords: Virtual reality Blockchain Ecosystem**



## BACKGROUND

### 2. 1 Virtual Reality is the Ultimate Form of the Internet

Virtual reality technology has been listed in the top ten of the new generation of information technologies by the National Scientific and Technological Innovation Planning for the 13th Five Year Plan. The VR industry features clear cross-border integration, rich business forms, great industrial potential and strong social benefits, and will provide new momentum to drive the development of the new generation of information communication technology (ICT).

The VR era is slowly opening up and will become the "next generation of Internet" and "next generation of the computing platform", which will bring revolutionary changes to people's production and life modes.

To exist is to be perceived. From visual digitization and virtualization, the trend of the world's virtualization is irreversible. With the development of technology, the human brain will eventually be able to access computers, the consciousness and senses will eventually be digitized, and the boundary between the virtual world and reality will eventually disappear.

As a matter of fact, what we see in games or movies is a virtual world, that is, some real worlds are re-rendered after being instantly digitized and virtualized; similarly, social networks digitize the relationship between people in real life in the virtual cyber world.

When the Internet and virtual technologies build virtual spaces corresponding to the real world or the world that we live in and allow for the exchange of information and materials and the replacement of consciousness and senses, virtual technology will connect the virtual world with reality. New dimensions of perception, interaction and convergence will open up, in which reality is insignificant and humans will perceive everything and each other in a whole new way.

## 2. 2 The Ultimate Form of the Internet is the Decentralized

*"Blockchain that can Perfectly Connect the Physical World to the Virtual World".*

Blockchain technology is considered to be the next generation of disruptive core technology after the steam engine, electricity and the Internet. If the steam engine released productivity, electricity solved basic living needs and the Internet thoroughly changed the information delivery mode, then blockchain, as a machine to build trust, can drastically change the way in which values are transmitted throughout human societies.

### Centralization will hinder the development of the Internet

Centralization will no longer open up the Internet. Both Facebook and WeChat are closed systems that create an isolated information island and severely hinder the flow of information. Users create data here and in theory users own this data. But in reality, users cannot access this data or even back it up, and this data can only be used by enterprises.

Decentralization will provide a freer, more transparent and fairer Internet environment.

## A decentralized Internet can better deliver values

In addition, the importance of value delivery is on par with that of information spreading in modern society.

The advent of the Internet has allowed information spreading modes to make leaps and bounds, and the efficient flow of information has been realized. However, the delivery efficiency of Internet values is still very slow.

The emergence of blockchain is the beginning for humans to build a value delivery network. It enables people to deliver values on the Internet as easily and cost-effectively as message sending. The convenience of value flow brought by blockchain will inevitably have a huge impact all over the world. For value delivery, the faster the flow, the more vibrant society is.

## 2. 3 Virtual Reality Technology is Maturing

### 2. 3. 1 The history of virtual reality technology

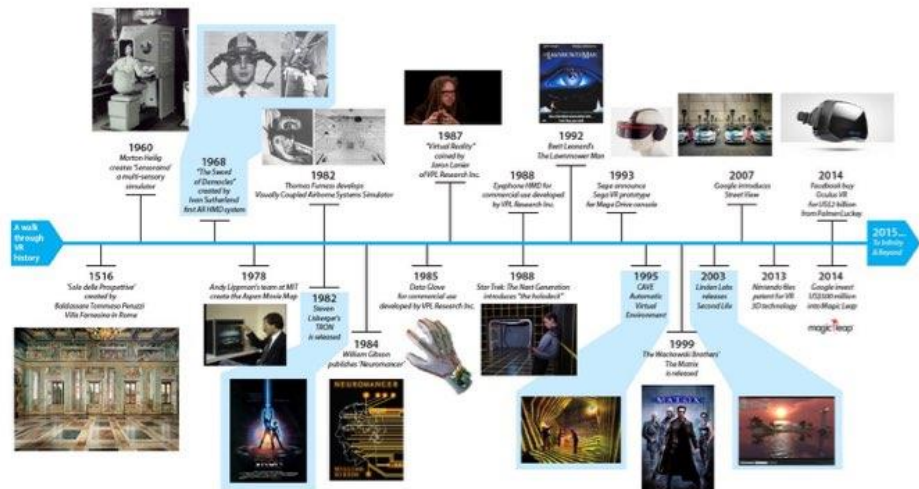
Virtual reality was first explored in the science fiction story "Pygmalion's Spectacles" by Stanley G. Weinbaum in 1950;

In 1968, Ivan Suzerland and his student Bob Sproull created the first virtual reality and augmented reality head-mounted display system;

In the 1980s, Jaron Lanier made "virtual reality" widely known. Lanier founded VPL Research in 1985 to research several types of virtual reality devices, such as data gloves, eye phones and volume control;

In the 1990s, many institutions, including Apple, SEGA and Nintendo, have continued to explore virtual reality software and hardware.

### VR History



### 2.3.2 Virtual reality technology is rapidly growing

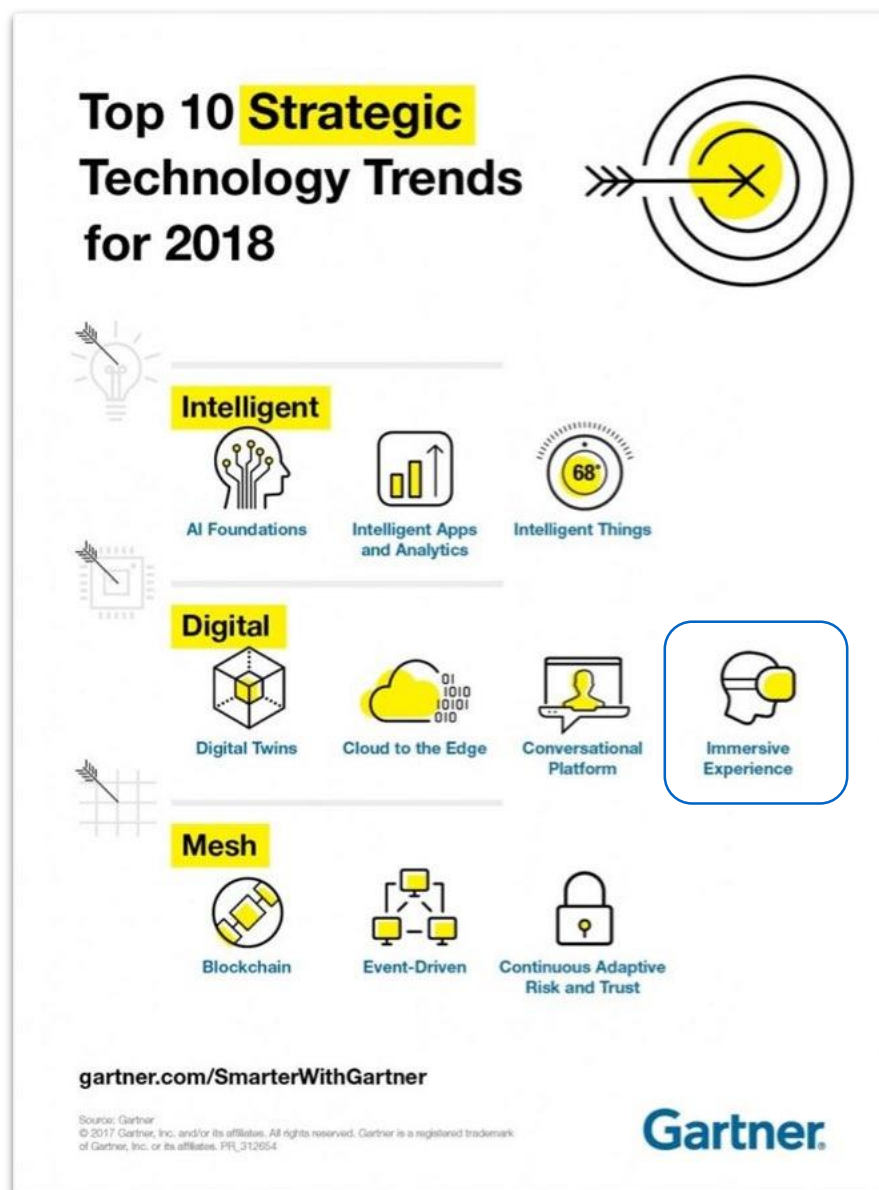
After 2010, virtual reality set off a boom around the world.

More and more virtual reality technology companies are providing a huge imaginary space for the entire business world by virtue of the "immersive effects" offered by virtual reality.

High-technology giants, including Facebook, HTC, Samsung, SONY, Microsoft, Google and Apple, have seized the vantage ground and have created many technical and patent reserves in stereoscopic display, data image processing, motion control, intelligent interaction and the like; they also have launched many types and styles of virtual reality system devices and development platforms, such as desktop, scene-type, head-mounted, glove-type and somatosensory; Intel, Nvidia and STMicroelectronics N.V. have released GPU chip and sensor devices dedicated to virtual reality; Qualcomm has released several flagship Snapdragon 820 and 835 processors for VR; Google, YouTube, Sony and Fox have also introduced virtual reality videos and games, all of which have accelerated the maturity and perfection of the virtual reality industry chain.



### 2.3.3 Development potential of virtual reality technology



Virtual reality is one of the focuses of industrial development.

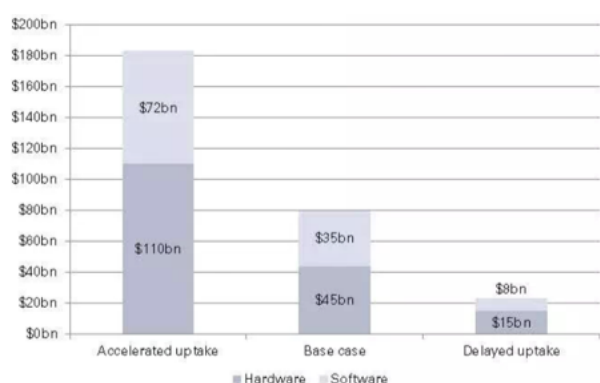
Virtual reality is changing the ways in which people perceive and interact with the digital world. Combined with a conversational platform, user experience will be subjected to a fundamental change and be converted into an invisible immersive environment.

Michael E. Porter [1] also lists VR as one of the most important technologies that needs to develop in the future in the Harvard Business Review issued in December 2017.

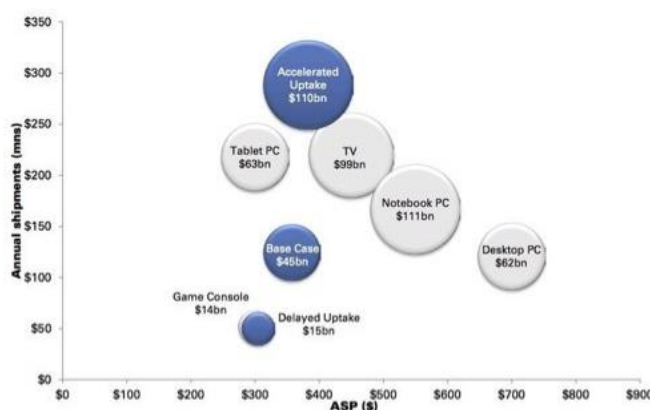
[1] Michael E. Porter is a professor at Harvard Business School. He can be described as a "living legend" in the global management thinking circle. He is the world's number one strategic authority and is recognized as the "father of competitive strategy" by the business management circle. He was ranked first in the Top 50 World Management Thinkers in 2005.

Goldman Sachs estimates that the revenue from VR hardware and software will reach \$80 billion by 2025; if it can quickly step out of the niche market and gain popularity, annual revenue could reach \$182 billion.

Goldman Sachs also estimates that the VR market will grow larger than the TV market by 2025, reaching a revenue of \$110 billion, while the TV market will only realize a revenue of \$99 billion. This is the most likely scenario, as improvements in battery and cellular network technology will accelerate the development of the VR industry. Next, high-end VR helmets will become a real mobile device after eliminating the cables and supporting computer.



Source: Goldman Sachs Global Investment Research.



Source: Goldman Sachs Global Investment Research, IDC

## Look to the future

In the decentralized Internet based on blockchain and virtual reality technology, people will be thousands of miles apart, but can be immediately connected via a simple operation, to realize face-to-face communication in the same virtual space. Meanwhile, many actions that cannot be conducted in reality can be realized in the virtual world: presenting files, playing videos and sharing photos in the air; traveling freely anywhere in the universe; trading virtual goods...



# Portal

## 3. 1 Product Definition

Portal intends to build a virtual reality ecosystem based on blockchain technology. Portal refers to the "transposition Gate" and means that users will be provided with a through-type and immersive virtual reality experience.



Portal is an ecosystem that will connect virtual reality content, creators and consumers. Our goal is to continually expand the Portal ecosystem circle, making it the next generation of the Internet with virtual reality at its core.

Anyone will be able to develop applications and upload copyrighted content via Portal, and they will even be able to develop their own platforms for operation.



### Entertainment and information communication

In Portal, with virtual reality technology, people will be able to perceive what's happening in the world, watch live virtual reality broadcasts, such as news, games and concerts, play virtual reality games and communicate face-to-face with others without ever going out.

Portal will also provide a strong social component, by which users can interact directly with fans in virtual space, or interconnect and communicate with friends in real-time virtual reality.

### Content publishing and management

In Portal, people will be able to quickly and easily publish their own copyrighted content and run their own brands with the tools provided by Portal, without the need for any coding.

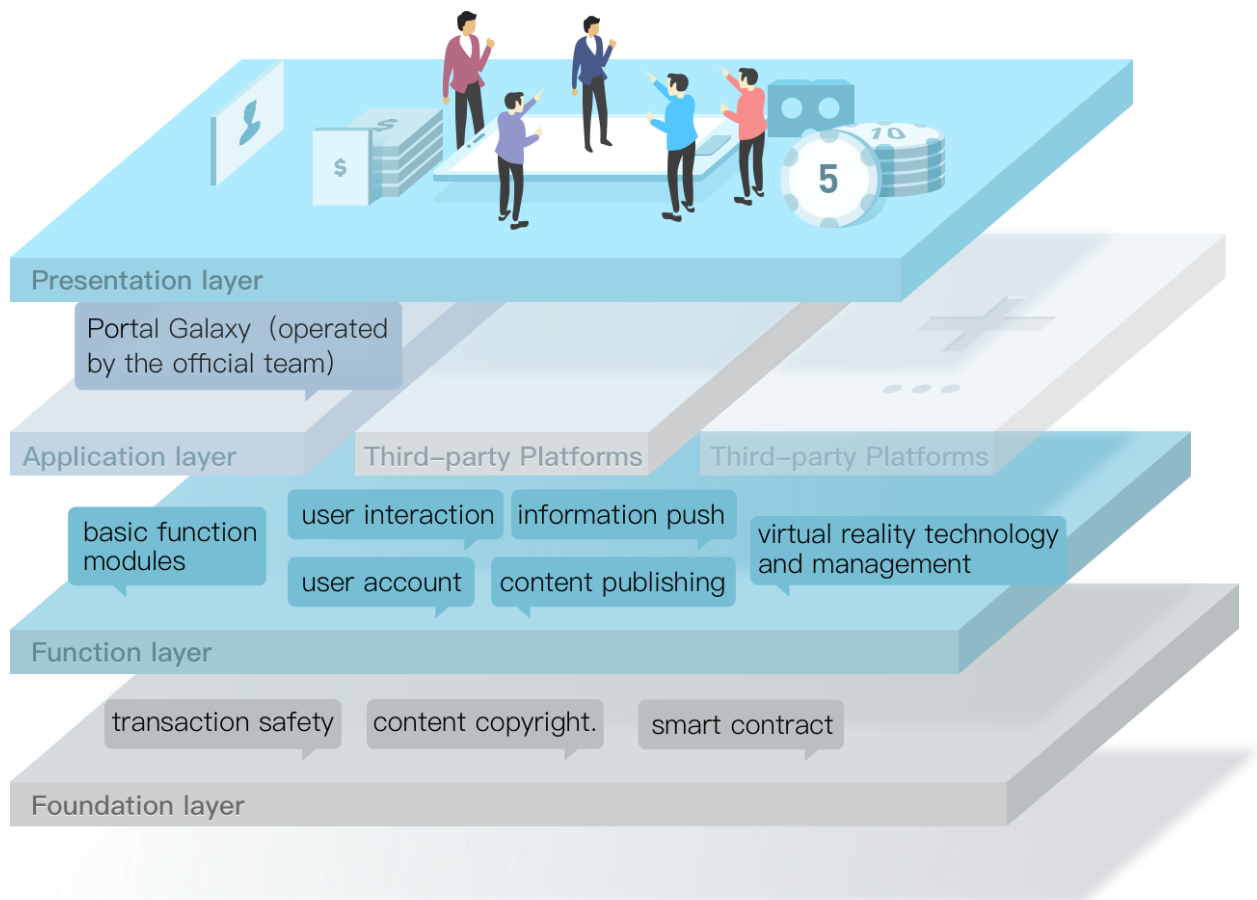
Anyone will be able to freely publish their content, gain attention and earn money as per the rules of the Portal world. All content will be encrypted by the smart contract and the copyright will only belong to the content creator.

### Platform building and operation

In Portal, people will be able to build their own rule branches, organize their own platforms, recruit content and application developers to post content, and run their own users as per the rules of the Portal world.

## 3. 2 Product Architecture

### Portal Architecture



#### Foundation layer

Determine the rules of the Portal world and build the basic agreement of the smart contract that protects transaction safety and content copyright.

#### Function layer

Provide basic function modules, including user account, user interaction, information push, content publishing, virtual reality technology and management.

## Application layer

On the basis of the basic rules established by the foundation layer and the functions provided by the function layer, developers will be able to freely develop, operate and maintain their own platforms. The relations of all platforms will be equal.

The first demonstration application platform of the Portal ecosystem, “Portal Galaxy”, has been launched and is operated by the official team. Portal Galaxy mainly operates virtual reality content and entertainment and carries premium and high-end VR content.

## Presentation layer

Users can access Portal with VR devices or phones and other smart mobile devices. After entering the Portal ecosystem from the unified entry, users can freely choose the platform, application and information.

## 3.3 Product Elements

### User account

Portal will provide users with a set of unique, complete and secure account systems. Each user will be assigned with a unique digital identity and digital wallet.

With this account, users will be able to use the services of various platforms in the ecosystem, that is, an identity will enjoy multi-platform services. Moreover, the activities of each platform will be mapped to this account. The security of this account will be ensured through an encryption key plus authentication in different application environments.

### PTC

PTCs are tokens that will be issued by Portal that is based on the Ethereum ERC20 standard. PTCs will circulate within the Portal ecosystem at a constant number.

### Wallet

This includes PTCs and other digital currencies held by the users. With the Portal platform account, users will be able to flexibly use and trade all digital currencies in their wallet in different environments based on agreements with different targets.

### Information push

Copyrighted information of the products and content requested by users will be stored on the blockchain. To facilitate users to efficiently and intelligently obtain the required information, we will classify, sort and push the information intelligently according to their preferences.

For intelligent classification and sorting, in addition to sorting rules based on users' preferences, we will also encourage premium content publishers and platforms to improve their rankings (paid listings) with PTCs. The Portal ecosystem will re-allocate the acquired PTCs to reward active behavior.

### Content publishing

The Portal ecosystem will establish basic ecological rules and provide developers with an easy-to-use SDK, so that they can publish content and applications on any platform in the ecosystem for attention and earnings.

Users will be able to access all content and can reward their favorite content and publishers.

## Interaction system

Users will be able to like, comment, reward, forward and share.

The effective active behavior of users (including content publishing and other activities) will be credited to the active list of the active reward pool and be ranked according to the proportion of the user's active behavior weight in the active behavior of the entire ecosystem over a period of time. The reward pool will regularly reward according to the current ranking.

## Platform release

The Portal ecosystem will provide platform developers with support for all function modules. Any developer will be able to build their own platform in the Portal ecosystem to attract content publishers to publish on their own platforms. Portal officials will first build a demonstrative official platform "Portal Galaxy" to collect virtual reality live broadcasts, virtual reality theater and social interaction.

The prosperity of the platform will greatly promote that of the Portal ecosystem. The Portal ecosystem welcomes all platform builders to join.

## 3. 4 Economic System

### Obtain PTCs

PTCs can be purchased at the legitimate exchange rate.

They can be obtained through activeness rewards in the ecosystem.

They can also be obtained through trading in the ecosystem.

Platform developers can obtain them by collecting maintenance fees.

### Store PTCs

PTCs obtained by users are stored in their digital wallet, and are encrypted and authenticated and cannot be tampered with, so as to ensure the security of the assets.

### Circulate PTCs

PTCs in the decentralized Portal ecosystem are freely circulated as per the basic rules agreed upon by everyone. The Portal ecosystem neither participates in nor supervises this.

### Exchange PTCs

Users are allowed to purchase services and applications with other digital currencies. In the Portal economic system, the exchange between PTCs and other digital currencies at the current price are supported and a certain exchange service fee will be collected in the process.

### Reward mechanism of PTCs

The Portal ecosystem rewards active behavior, and encourages content publishing and production. On this account, more application publishers are encouraged to publish content to build a prosperous ecosystem.

Portal will set up a dedicated active reward pool to reward users who contribute to the activity of the ecosystem and allocate the rewards to active users through a specially designed Tidal Wave Algorithm (TWA) and Contribution Weighting Algorithm (CWA).

## Purpose of PTCs

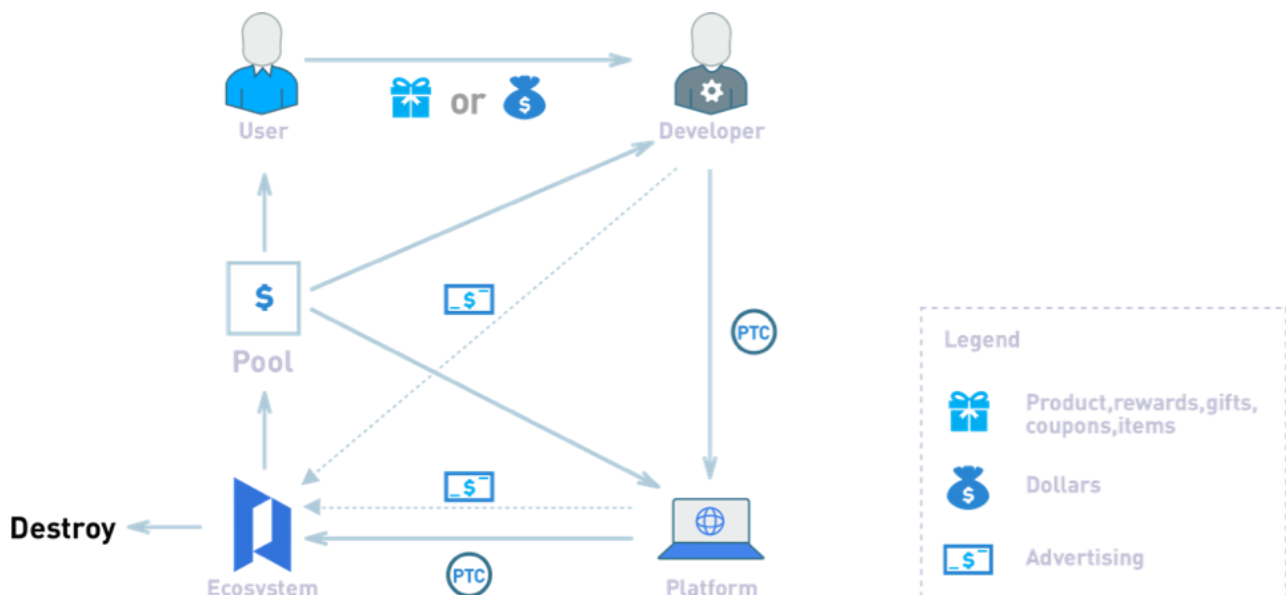
Service fee: platform builders pay it to the Portal ecosystem to obtain support for virtual reality core technologies, hardware and services; content publishers pay it to the platform to obtain the platform's technology and service support.

Reward: users can encourage content publishing behavior by rewarding publishers, so as to obtain more and more interesting content.

Trade: content, applications and virtual items.

## Portal

Economic system



## 3. 5 Ecological System

### Portal Ecosystem



### Ecosystem maintainer

The Portal team and follow-up operators will assume this role. To promote the prosperity of the community, we will continuously improve basic technical support services, enrich virtual reality application scenarios, expand user interaction capabilities and enhance the user experience, so that users can stay active. In the ecosystem, we will also act as bystanders and stabilizers of the world, to assist the limited democracy management committee to maintain the healthy development of the economic and ecological systems.

## Platform team

Both officials and third parties will have equal status and everyone can independently develop their own platform. Anyone who pays a certain amount of PTCs can build their own platform in the Portal ecosystem.

By operating an active platform, the platform team can, on the one hand, obtain PTC rewards from the active reward pool through the CWA, and on the other hand, earn PTCs through reasonable agreements with other users in the platform ecosystem.

## Content developers

Content and application developers can upload their content to their favorite platforms based on the protocols of their respective platforms and they will own the copyrights and full administrative rights of the uploaded content.

By publishing more content, developers can obtain PTC rewards from the active reward pool through the CWA and can also receive usage fees or even rewards from other users by relying on their own content value. We encourage more developers to join to build a better virtual reality experience for users.

## Users

Users can choose to visit any platform that they are interested in to access applications or content. Users are not only an important driving force for developers and platform teams, but also an important active force, so we will also give them PTC rewards from the active reward pool through the CWA.

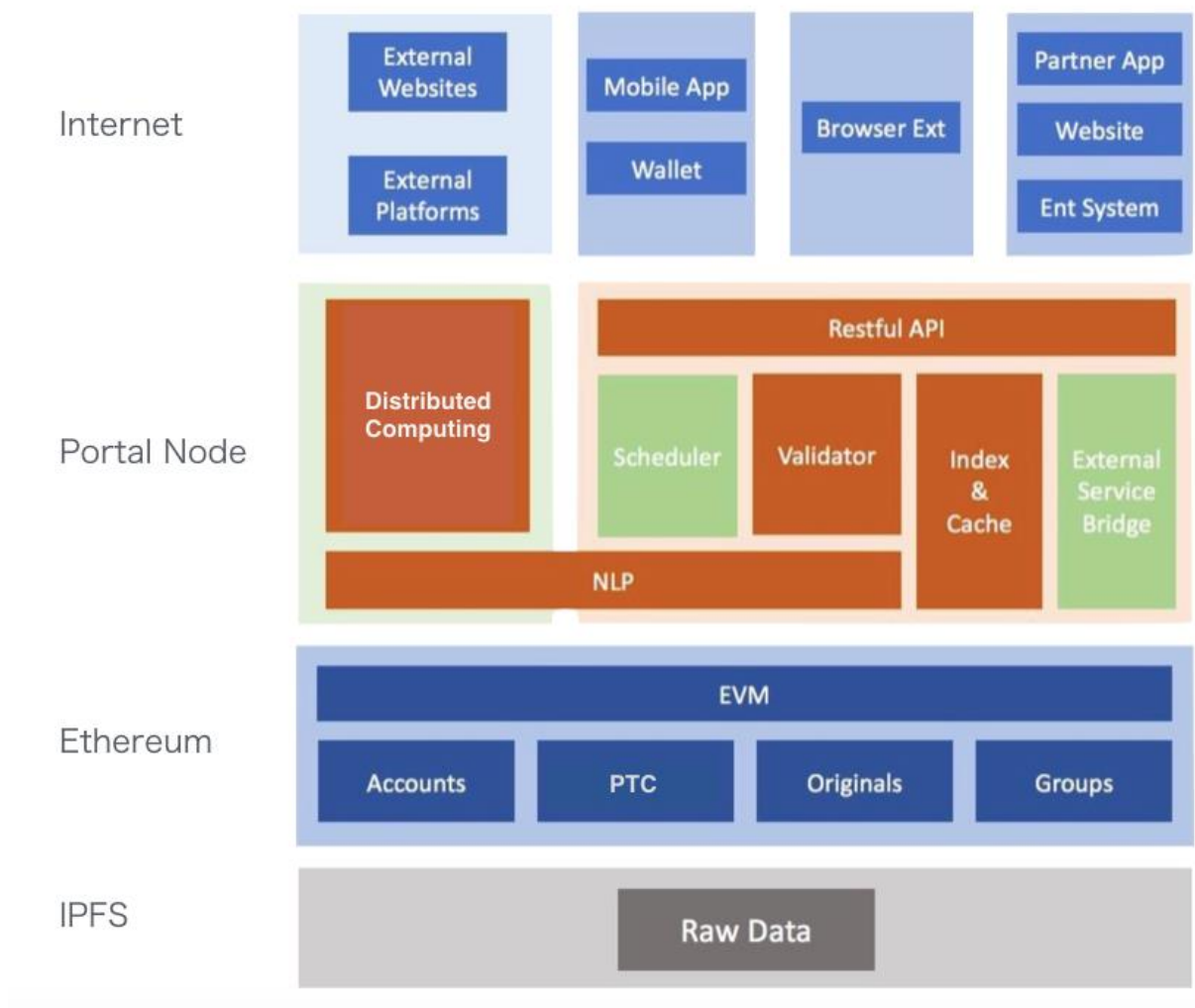
## 3. 6 Technical Support

### 3.6.1 Blockchain technology solutions

The underlying architecture of the Portal is based on Ethereum. The key logic is implemented by smart contracts, the core data is also written into the blockchain by smart contracts and the content data is stored in IPFS.

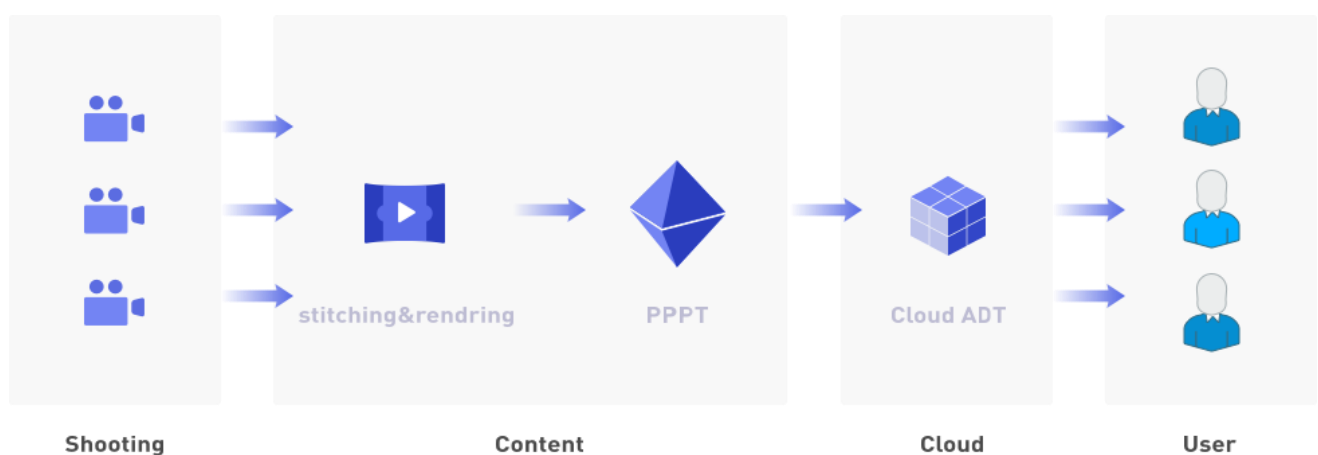
The upper layer of the blockchain is the Portal Node, which is used to run services, invoke external services and perform complex operations. The Portal Node is directly connected to the blockchain and invokes smart contracts to complete key operations and data write verification; the Portal Node will also provide a Restful API to be invoked by all clients, and provides distributed data caching, indexing and other functions to accelerate client access.

The upper layer of the Portal Node is the client directly used by users. Any developer or user can join the Portal ecosystem through the Portal Node.



### 3.6.2 Virtual reality technical solutions

The Portal team is one of the earliest teams to engage in the field of virtual reality. With its profound technical strength and rich project experience, the Portal team has mastered industry-leading core technologies, such as virtual reality live broadcasting, content production, network transmission and immersive interaction. Portal will provide each participant in the ecosystem with state-of-the-art virtual reality technologies.



#### Polyhedral pyramid projection technology

The Portal ecosystem will provide users with powerful video compression and network transmission core technologies (which are also the key to HD transmission of virtual reality video content) and a complete set of hardware solutions, to protect content production and transmission.

With self-developed "polyhedral pyramid projection" technology, video compression and network transmission reduce the transport stream by up to 80% without reducing image quality, meaning that 80% of the bandwidth occupancy can be saved. The application of this technology is of great practical significance to the transmission of virtual reality videos.

## Cloud ADT (Cloud Adaptive Distribution Technology)

VR video adaptive cloud distribution technology based on sight line adopts the features of VR videos that play and display the local angle of view, and is combined with sight line adaptation, dynamic adaptive coding and multi-sector division. Terminal play selects, decodes and renders the optimized video resolution/sector based on the user's head orientation and the chip's decoding capability constraints.

Benefiting from the application of polyhedral pyramid projection technology and VR video adaptive cloud transmission technology, smooth virtual reality live broadcasts with high-quality images are guaranteed while network transmission costs are effectively saved.

## Top virtual reality devices

Portal has cooperated with top virtual reality companies worldwide. It has received support from a number of industry leaders, including Jaunt, Nokia and SONY.

For individual users (content developers), Portal will provide a lightweight and cost-effective personal VR Camera, which is ready out-of-the-box and automatically generates VR images, without the need for the user to carry out splicing or other operations. For platform developers and specialty content developers, Portal will provide industry-leading professional VR Camera solutions.

Individual VR Camera



Professional VR Camera



## 3. 7 Content Support

Virtual reality live broadcasts can be widely used in concerts, sporting events, variety shows and other types of content. With a sensory experience comparable to that on-site, it will become the necessary form of future large-scale live broadcasts.

Portal plans to promote the perfection level of live VR broadcasts to the same level as traditional live TV. The Portal ecosystem will continue to introduce VR content from various film, television and radio giants and provide technical assistance and Portal ecosystem promotion opportunities for any institution that wishes to obtain VR live broadcast capabilities.

This means that in the near future, live broadcasts will only be performed by VR. Audiences will experience the shocking feeling of appearing on-site in person when watching or enjoying any real-time event, activity or grand ceremony.

Portal plans to unite top teams in the industry to promote virtual reality technology to traditional culture, entertainment and film industries.



Media Giants in VR



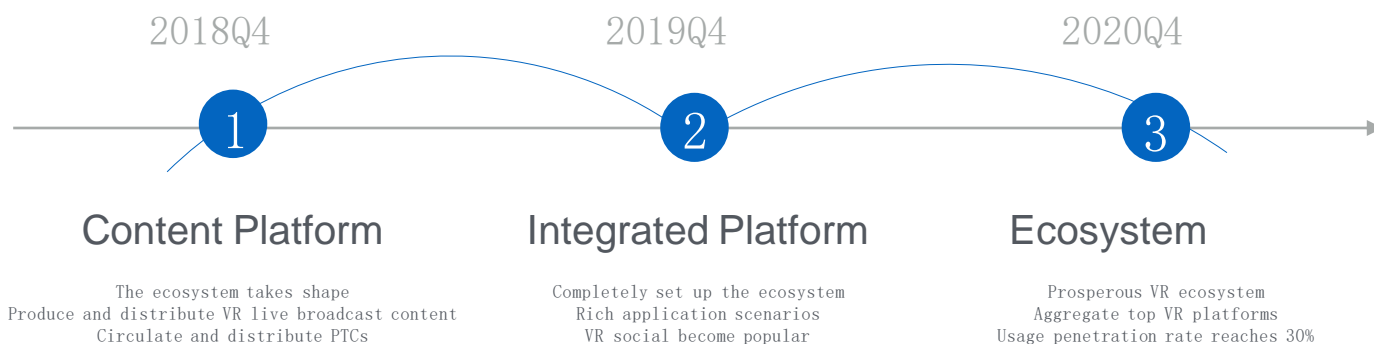
# Roadmap

## 4. 1 Portal's 3-year Plan

Portal plans to complete building of the virtual reality ecosystem within 3 years.

### Portal

#### 3 Years Plan



# 4. 2 PTC Distribution Plan

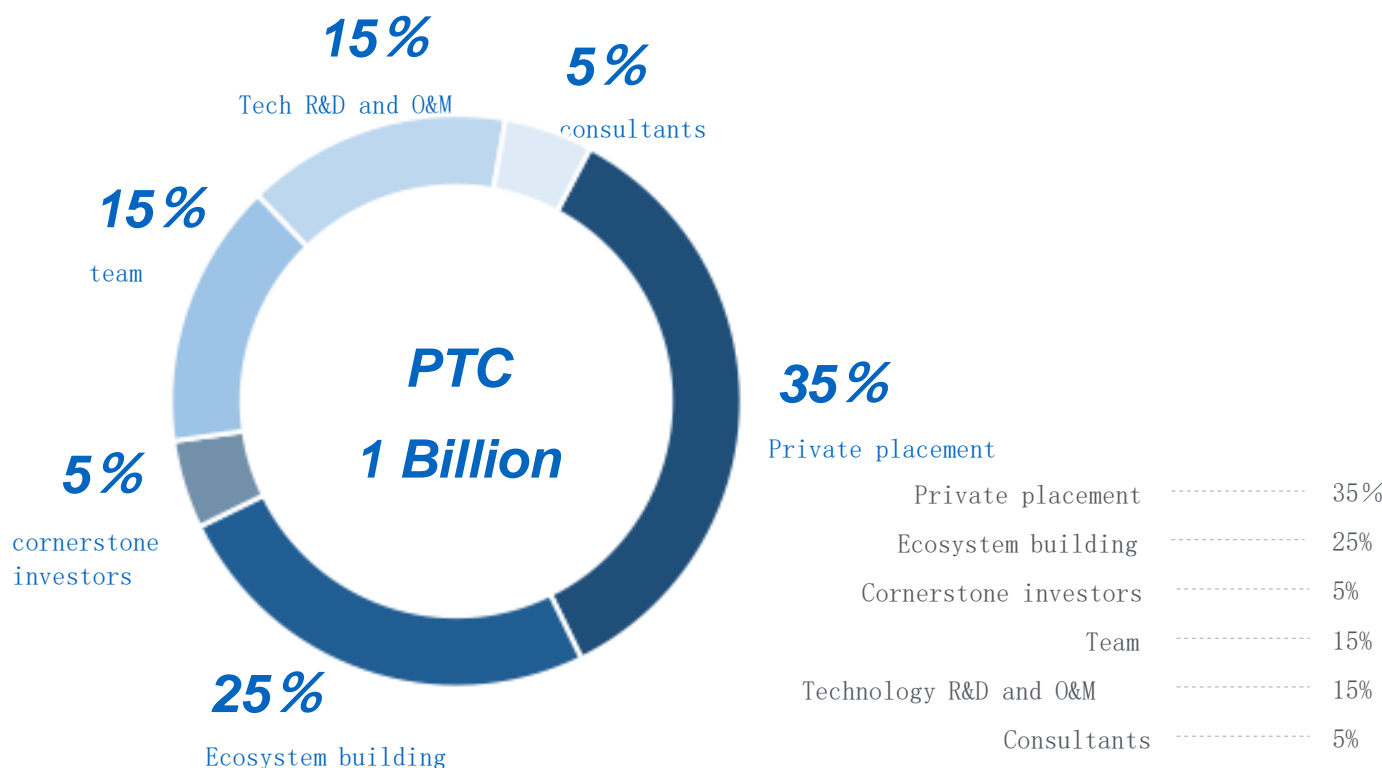
## Distribution purposes

To effectively encourage ecosystem builders and participants and achieve prosperity and growth of the ecosystem, Portal will distribute the original Token PTCs that will circulate within the ecosystem.

## Allocation plan

The total number of distributed PTCs will be 1,000,000,000 (1 billion) and no additional PTCS will ever be issued.

- 35% for private placement;
- 25% for ecosystem building;
- 15% for technology R&D and O&M;
- 15% held by the team;
- 5% held by the cornerstone investors;
- 5% held by the consultants.



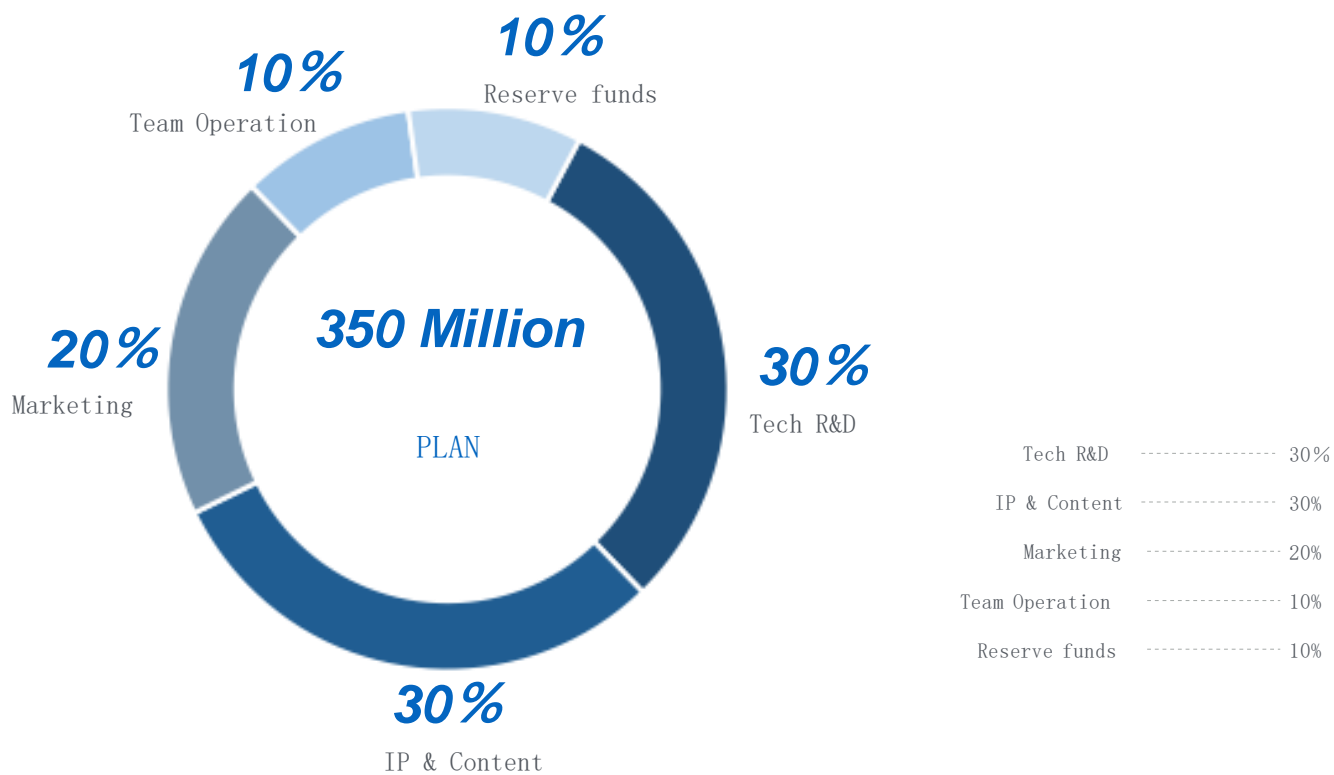
### Private placement

Private placement accounts for 35% of the total distribution amount or 350 million PTCs, targeting only certain buyers and raising by ETH, with a total equivalent of 40,000 ETH.

Pre-sales will target only for specific buyers (Residents of China and UN sanctioned countries are unable to participate).

The funds raised will be used for technology R&D and services of the Portal ecosystem.

The specific fund utilization plan is as follows:



### Ecosystem building

To maintain the rapid growth of the ecosystem, Portal will reserve 25% of the PTCs as ecosystem reward funds, which will be used for platform rewards, ecosystem hatching and business development.

This portion of PTCs will be held by the Portal Foundation on behalf of the holders.

## Technology R&D and O&M

To maintain sustainable development of the ecosystem, Portal will reserve 15% of the PTCs as the technology R&D and O&M funds of the ecosystem, which will be used for the exploration of virtual reality technologies and the operation of the official team.

This portion of PTCs will be held by the Portal Foundation on behalf of the holders.

## Held by the team

The Portal team has put a lot of effort into the birth and development of the Portal ecosystem and has provided the full range of products and technologies; therefore, it reserves a reasonable percentage for bonuses and rewards.

Lock position commitment: the part held by the team will be locked for 6 months and 10% of it will be unlocked per month after.

## Consultants and cornerstone investors

Consultants and cornerstone investors have provided favorable resources and financial support for the Portal ecosystem and indispensable help in the birth and development of Portal. Therefore, a reasonable proportion is reserved as return. It will be locked for 6 months.

## 4. 3 PTC's Value Increase Plan

### Repurchase mechanism

Portal will buy back PTCs at the current price on the trading market with 50% of the profits obtained from the sales of subsequent hardware, such as VR Cameras and VR devices. The repurchased PTCs will be permanently destroyed so that the number of PTCs will be gradually reduced. Repurchase details and destruction results will be publicized.

### Deposit mechanism

A certain amount of deposits shall be paid to build the platform inside the Portal ecosystem, to avoid resource waste and regulate content. With an increasing number of platform developers, the frozen PTCs will gradually increase and circulated PTCs will gradually decrease.

### Increase acquisition cost









With an increasing number of users, the threshold to obtain various kinds of valid active behavior rewards will be higher according to the platform algorithm. The increase of the acquisition cost will enhance the scarcity of PTCs.

It is foreseeable that as the Portal platform continues to grow and expand, the demand for PTCs will continue to increase, while the total number of PTCs will remain constant, so it will become increasingly difficult to obtain them and the value of a single PTC will continue to rise.



## Partners

The building process of the Portal ecosystem will be full of challenges. To better solve all kinds of problems that may be encountered in the process of building the Portal ecosystem, we will escort the Portal project and provide comprehensive support to maximize the value of users by cooperating with top companies and teams in various fields, such as virtual reality technology, hardware, network communication and blockchain technology.

## WHALEY·VR

Since its establishment in 2014, Whaley VR has won hundreds of millions in investment from Legend Capital [1] and China Media Capital [2] and has rapidly grown into a world-class virtual reality and content platform company by virtue of strong R&D strength and creative content production capabilities.

Well-known virtual reality projects performed by Whaley VR include:

Worked with Digital Domain [3] to broadcast the **2016 Faye Wong concert live** - the world's most successful commercial VR live broadcast

Worked with Jiangsu TV [4] to broadcast the **2017 and 2018 New Year's Eve concerts live** - the world's first 6K VR live broadcasts

Worked with China Sports Media [5] to broadcast **2017 CSL (Chinese Football Association Super League) events live** - the world's first series of VR live broadcasts of football matches

Worked with Canxing Culture & Broadcast [6] to broadcast the final of Sing! China **live** - China's most widely-viewed VR live broadcast



## [1] Legend Capital

The core businesses of Legend Capital are venture investment in the start-up period and growth investment in the expansion-period. It strives to "help and promote the growth of China's pioneering enterprises through funds and management." At present, the total scale of USD and RMB funds managed by Legend Capital exceeds RMB35 billion, with a focus on China's innovation and growth opportunities. As of 2017, Legend Capital has injected capital into more than 300 companies, 60 of which have been successfully listed at home or abroad. Legend Capital is very optimistic about the future of the VR industry and is also one of the investors of Noitom.

## [2] China Media Capital

China Media Capital (CMC for short) has built one of the world's most influential media empires. By focusing on the allocation of the culture and entertainment fields and bringing together a global premium investor portfolio with strong capital support, CMC has formed unique strategic resources and managed and operated the largest domestic cultural industry funds, and has successfully built a series of leading domestic and international industry leaders, including Oriental Dream Works, Flagship Entertainment Group, Shaw Brothers, IMAX China, Star TV, Daylight Entertainment, Caixin Media, China Sports Media, City Football Group, Siba Media and Secoo.

CMC is very optimistic about the prospect of the development of the VR industry. It is also an investor in Jaunt, Next VR and other Silicon Valley VR technology companies.

## [3] Digital Domain

Digital Domain is engaged in the culture and entertainment industries, digital visual effects and film co-production businesses, and strives to pursue new opportunities in the fields of virtual reality, the digital world and immersive entertainment. Its representative works include "Titanic", the "Transformers" series and the "Lord of the Rings" series and have won a total of 9 Oscar Academy Awards.

## [4] Jiangsu TV

Jiangsu TV is the main channel subordinate to the Jiangsu Broadcasting Cooperation. The line-up, choreography and public praise of the annual New Year's Eve concert held by Jiangsu TV is the best among all New Year's Eve concerts.

## 5] China Sports Media

China Sports Media is the builder of China's sports event signal production and copyright operation architecture and has steadily advanced itself as the leader of the Chinese sports industry with more than 15 years of intensive work. In particular, it has accumulated rich experience in the integrated operation of the football match industry chain and has actively developed the international market. It is a prominent example of IP operations in Chinese sports industry companies based on the entire industry layout performed under the core match copyright (CSL, AFC and national team).

## [6] Canxing Culture & Broadcast

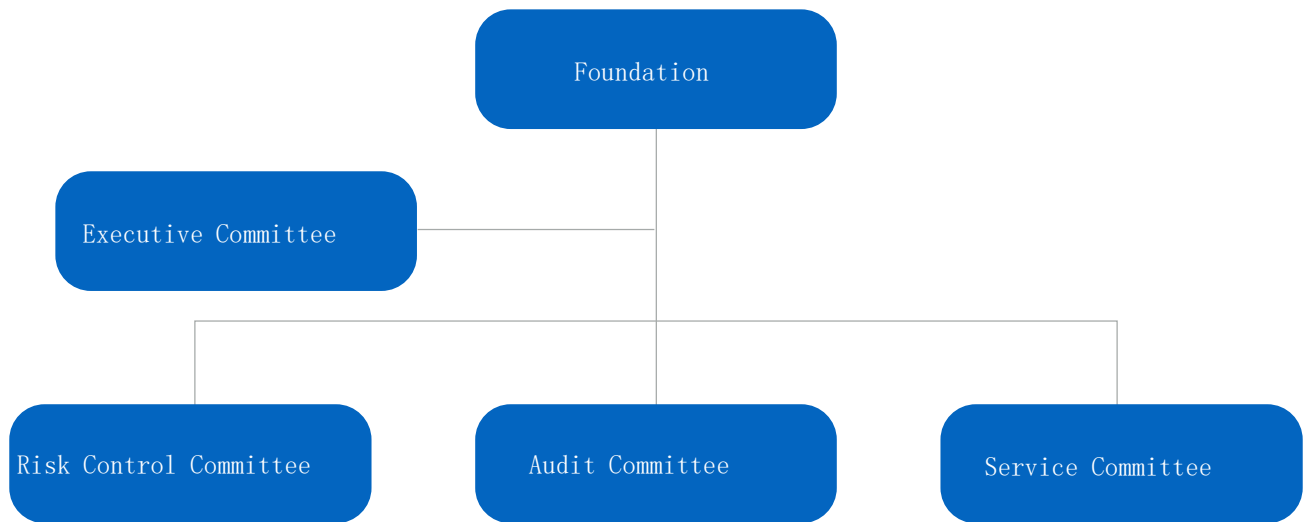
Canxing Culture & Broadcast is a telecast production company subordinate to Star TV and is famous for its production of high-quality variety entertainment programs. Its representative works include "The Voice of China", "Sing! China", "The Great Challenge", and "King of the Masked Singers".



Primas devotes itself to changing the existing content market pattern and addressing the issues encountered by high-quality content that are difficult to identify, spread and liquidate through blockchain and other technical means. Users are allowed to access premium content through the tracking and screening mechanism of decentralized content. The brand-new content value evaluation system ensures that premium content producers directly benefit. Copyright protection is provided for the originators through the tamper resistance of the blockchain. Decentralized data management will also better protect the privacy of users.

Portal will build a strategic partnership with Primas in the blockchain field.

## 6.3 Foundation



The Portal Foundation is registered in Singapore.

The Executive Committee researches and drafts long-term plans, establishes the rules and management systems, and conducts project feasibility analysis, study and approval.

The Risk Control Committee researches and formulates risk control strategies, reviews the overall operation risks and is responsible for the general meeting of the Foundation.

The Audit Committee is responsible for application audits, financial audits, code audits and PTC daily operation audits.

The Service Committee is responsible for the expansion and operation of the Portal projects, including global expansion, personnel management and daily transaction processing.

# Portalers

## Dating expert

Daenerys is beautiful but introverted, remaining single since breaking up with her college boyfriend two years ago. Being busy till late every day, Daenerys recently became fascinated by logging into Portal to relax and reduce stress in another world. In the Portal world, Daenerys can easily let go of the camouflage of the reality and release her charm. Many boys that have common interests with Daenerys have encountered and learned about Daenerys during the use of other Portal features. Once, Daenerys found that a handsome boy, Drogo, has followed her, and the Portal shows that the programs regularly watched by Drogo are similar to hers. Common topics bring the two closer together, and now the two of them live in each other's hearts.

## She comes to my concert

Fly, a super queen, will hold the "Two Magic Music" concert, causing a sensation throughout China, with ticket prices soaring. Cersei, who loves Fly, tries to buy a ticket, but fails. She ends her relationship and wants to buy a ticket from the ticket resale but fails because of a limited budget. The concert is about to begin in 3 hours and Cersei sobs with despair. At this time, her boyfriend Jaime comes over, dries her tears, and takes her into the Portal world and the scene of the "Two Magic Music" concert. Cersei is thrilled to see Fly in front of her. She finally gets to hear this dream concert. I love you, Jaime, and I love Portal too.

## I am the king of gamblers

Petyr is a smart guy. Right now, this smart guy is sitting at the gambling table and the many chips show his gains today. Petyr proudly rubs his little finger and looks across at Jorah, who has lost so much, but still counts on a comeback. BlackJack! Jorah is too excited to jump up as he finally gets a big win. Jorah looks at the virtual assistant for the time. "I'm leaving for a while, I'm going with my wife ..." "Is she going to South America for medical assistance?" asks Petyr. "Don't forget Portal+", Jorah laughs.

## We are the champions!

Jon can hardly control himself due to nervousness, and the storm of sound from 80,000 people at the stadium cannot calm his tension. He feels his heart beat violently and his soul seems to have left his body. At this moment, "Goal !!!!!!!!" The special long tone from the live Spanish DJ sounds at Santiago Bernabéu stadium and the fans break into loud cheers. Jon feels that the blood in his body will explode as he cheers with tens of thousands of fans around him. At this moment he feels that his soul is back and alive again. "Champion! Champion!" Nothing is impossible. Real Madrid has won its third UEFA Champions League in three years! Three successive championships! Jon takes off the virtual reality device and returns to the reality that is far away Siberia. The coldness outside cannot stop the inner heat and the cold temperature cannot freeze the tears of excitement. "I'll log into the Portal to celebrate with everyone at Madrid Harvest Goddess Square", says Jon to his coworkers who guard the Northern oilfield.

## Shop with KOL

Recently, Tyrion has been obsessed with Shae, an anchor at the Portal. Tyrion cannot help himself with the sexy dance Shae does in front of him every day. After continuously presenting gifts, they finally become good friends. Shae's birthday is coming and Tyrion intends to give Shae a surprise, but he really doesn't know what to buy. Luckily, he finds the fashion leader Sansa in the Portal and Sansa is glad to help out Tyrion. They go to London through the Portal, where Sansa not only helps Tyrion choose a gift, but also helps Tyrion pick up a decent suit. This is the vision from a fashion blogger. Tyrion is now very happy to wait for the express delivery. He is going to celebrate Shae's birthday on a beautiful night.

# Risk Warning

As a new model of investment, investment in digital asset involves various risks. Potential investors shall discreetly assess the investment risks and their own risk tolerance.

## Risks on Token Sales Market

The environment of Token sales market is closely associated with the situation of the whole digital currency market. In case of sluggish overall market situation or existence of other uncontrollable factors, the price of Token may be underestimated over a long period of time, in spite of their own good prospect.

### Supervision Risks

Since Blockchain is still in the early stage of development, there are still no laws and regulation across the world, including in China, that stipulate requirements for precondition, transaction, information disclosure, and locking, etc. in the process of ICO. Also it's still unclear as to how the current policies will be implemented. All these factors may bring uncertainty to project investment and liquidity. Blockchain technology has become the main target of supervision in major countries of the world. If there is any intervention or exertion of influence by supervising authorities, Portal or PTC may be affected. For example, if there is legal limitation on the use and sale of Token, PTC may suffer restriction and obstruction, or the development of Portal and PTC may be directly terminated.

## Competition

## Risks

With advancement of information technology and mobile Internet, digital assets with “Bitcoin” as a representative are gradually prospering and various decentralized applications are continuously emerging, heating up industrial competition. With the steady appearance and expansion of other application platforms, the community will face constant operation pressure and certain risks from market competition.

## Risk of Talent Loss

Portal has gathered a technical team and expert consultants with leading advantage and profound experiences in their respective professional sectors, including professionals with lasting engagement in the Blockchain industry and core team with rich experience in development and operation of Internet product. The core competitiveness of Portal in the industry lies in its stable core team and consultant resources, the loss of which may affect stable platform operation or its future development.

## Risk of Development Failure Due to Fund Shortage

In case of dropping price of Token raised by the founding team or prolonged development time, the team may face a shortage of development fund and possibly even suffer subsequent serious shortage of fund for all activities. In such case, there will be a risk that the intended targets will not be realized.

## Risk of Private Key Loss

After the digital wallet address of PTC is extracted by the buyer, the only means to operate content contained in the address is by his/her associated secret key (private key or wallet passcode). Users are personally responsible for protecting the associated secret keys which will be used to sign transactions and prove their asset ownership. Users understand and accept that if his/her private key document or passcode are respectively lost or stolen, his/her PTC associated with his/her user account (address) or passcode will be unrecoverable and permanently lost. The best method for secure storage of log-in document is to store the secret key separately at one or several places and avoid using a shared computer for this purpose.

## Risk of Hacking or Theft

There is a possibility that hackers, other entities or nations may attempt to interrupt Portal or PTC function with any methods, including but not limited to DoS attack, Sybil attack, guerrilla-style attack, malware attack and homogeneity attack, etc.

## Risk of Absence of Loss Insurance

Unlike bank account or accounts with other financial institutions, Portal account or related Blockchain network are generally without any insurance guarantee. For losses under any conditions, no public individual or public entity will provide insurance.

## Risks of Core Protocols

Currently Portal is developed on the basis of Ethereum. In case of any defect, unexpected malfunction or attack to Ethereum, PTC or Portal may suffer a stop or loss of function in a manner hard to expect.

## System Risk

There are risks related to neglected critical defects in open source software or large-scale failure of global network infrastructure. Though some of the risks may drop over time due to bug fixes and breakthroughs in computation bottleneck, other risks are still unpredictable, such as

## Risks Due to Bugs or Cryptography Development

Rapid cryptography development and advancement of science and technology such as quantum computer may bring the risk of cracking to Portal, leading to possible PTC loss.

## Risks of Insufficient Attention

There is a possibility that Portal may fail to be used by a large number of individuals or entities. This means that the public do not have enough interest in developing and improving the relevant distributed applications. Such lack of interest may bring negative impact to PTC and Portal.

## Risk of Poor Acceptance or User Shortage

First of all PTC shall not be deemed as an investment target. Even if PTC may have some value after some time, such value can be very small if Portal is not accepted by the market and is therefore short of users. There is a possibility that due to any possible reasons, including but not limited to failure in business relations or marketing strategy, Portal and all the future marketing efforts supported with the raised fund may fail to achieve success. In such case, there will be few or no follow-up supporters for the ecosystem. Of course, this will be very unfavorable to this project.

## Risk of Application Defect

Portal may fail to provide normal service due to defects caused by known or unknown reasons (e.g. large-scale Node crash), and may even suffer loss of user PTC in a serious situation.

## Risk of Application or Product Failing to Reach Their Expectation or Buyer's Expectation

Portal is still under development stage, and major changes may be made before the launch of official version. The expectation or imagination by PTC itself or by buyers for the function or manner (including behaviors of participants) of Portal or PTC may not be satisfied. Such situation may be caused by any analysis mistake or change of a single design, etc.

## Other Unpredictable Risks

Token which is based on cryptography is a fully new technology that has not been tested. In addition to risks already described in this White Paper, there are other risks that are not yet mentioned or not anticipated by the founding team. Also, other risks may come suddenly, or several risks mentioned above may occur in combination.

## Contact information



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Project Portal



BLOCKCHAIN-BASED  
VIRTUAL REALITY ECOSYSTEM



portal

Present

2018.1 v1.0