

Version 1.0

Building Global Creditabl

# Game Service Ecosystem

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# PREFACE

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Games can reshape an epic future for mankind. The real objective of games is the survival of the human species, because the real world is a badly designed game. The problem is that current games are leading us to forget reality, but the reality is inescapable. So a wise idea is to change the world with the knowledge learned from games. Let the world-changing games begin!

—— Jane McGonigal, writer of the book Reality Is Broken

”

Games are conscious simulation activities needed by all youngsters (animal and mankind) to live and enhance power.

—— Plato

Games are the rest and entertainment after working. They are activities that does not associated with goals.

—— Aristotle

That’s what games are, in the end. Teachers. Fun is just another word for learning.

—— Raph Koster, Chief Creative Officer at Sony Online Entertainment

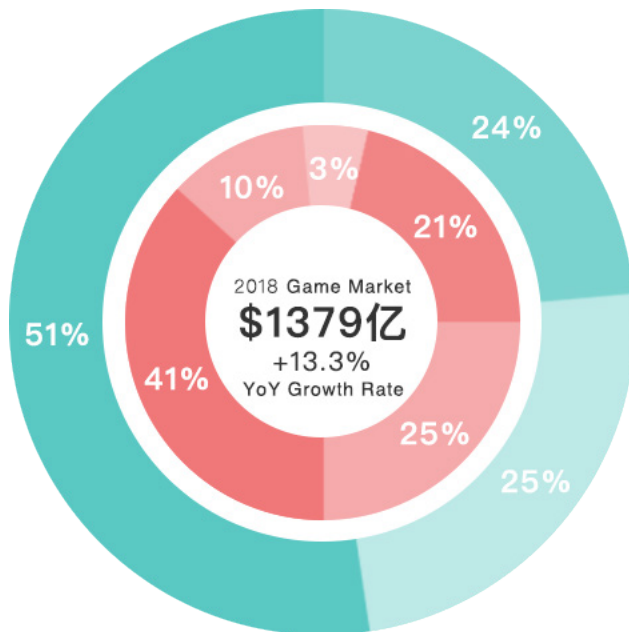
Game is an activity that aims to gain direct happiness and must have participants’ interaction.

—— Cihai

## Global Game Market Size

According to the Global Game Market Report by Newzoo, an independent market intelligence, an estimated 230 million users will spend \$137.9 billion on games in 2018, more than 13% year-on-year growth over 2017. Digital revenues will account for 91% of the market, or \$125.3 billion, with smartphone and tablet gaming revenue growing +25.5% year on year to \$70.3 billion, consoles reaching \$34.6 billion and PC, \$32.9 billion.

Of all countries by game revenue ranking, China still tops the list, capturing over 1/4 of global game market, with 60% came from Mobile game, which is expected to reach **70%** in 2021. North American is the second, followed by Europe.



In 2018, mobile games will generate

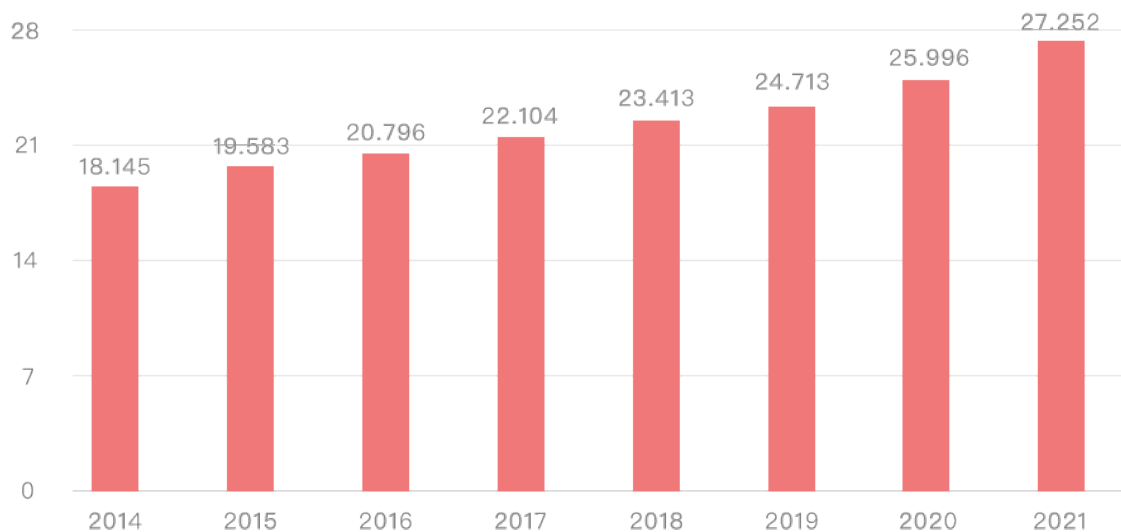
**\$70.3Bn**

Or **51%** of the global market

In the latest report, game industry will see an explosive growth in the forecast. CAGR will reach 10.3% from 2017 to 2021, with total revenue of \$180.1 billion.

In 2021, mobile games will bring \$106.4 billion revenue, accounting 59% of the total market. PC games in general will sustain a stable growth of 1.8% due to the increase in downloaded/boxed PC games, while browser PC games will gradually transfer to mobile ends. Streaming media and eSports will push up the growth of console games to 4.1%, with a revenue of \$3.9 billion.

According to the statistics, there are 2.21 billion active players in 2017. With the enlarging global game market, active players will rise, with an estimation of 2.7 billion in 2021.

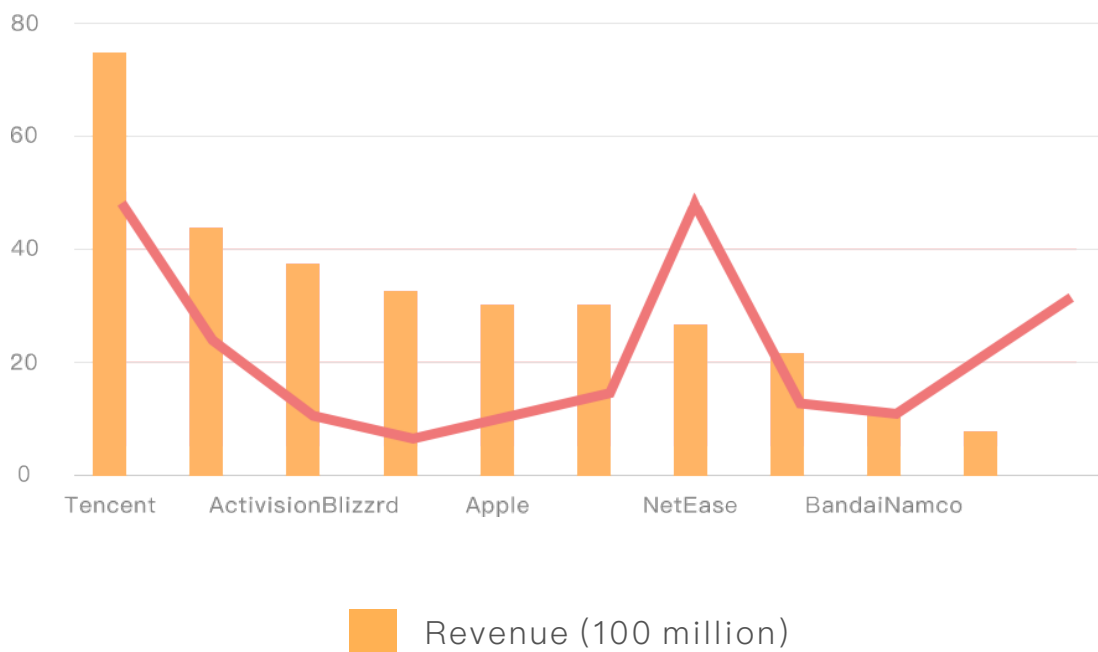


The number of active players (100 million)

In terms of the active user distribution, Asia-Pacific (excluding China) has the world's largest pool of game enthusiasts, with 535.7 million active players. China has 56,280 active players, ranking the second. The third is Americas, with 38,620 active players.

## The World's Top 10 Games

### Game Revenue of Top 10 Listed Companies in First Half of 2017



In the Report, Newzoo updated the ranks of listed companies by game revenue in the first half of 2017, and also mentioned 'the total game revenue of top 10 companies reached \$31.4 billion, with 24% year-on-year growth'.

Statistics show that the game industry is on the rise and holds a promising market.

## Current Game Market Problems



### Entrenchment by Game Giants

Due to the entrenchment of several major game giants (Microsoft, Sony, EA, Tencent, Netease), a large part of the game industry's revenue is handled and shared by the top 20 game companies who are forming strong monopoly of the industry.



### Rigid Industrial Mode

The entire game industry, whether it is company ranking, game types, operation mode, etc., has formed a set of standardized systems. Since new type of games will bring high cost on development, distribution and operation, innovative concept can hardly be supported, which also makes it difficult for innovative startups to survive.





## Centralized Distribution

Currently, most games develop, distribute and operate in a centralized system. Decentralize the distribution of games, however, will optimize the life cycle, cost and speed of evolution of a game or for the benefit of the game company as a whole.



## Low Participation

Players are very much intended to participate in game development and pattern design, but this is hard to realize in the traditional modes, where game development is always isolated from game participation.



## Unguaranteed Equity

Players will generate game credits, props, and records for themselves when participating in each game. In the traditional game mode, since all platforms are centralized, the security and equity of the above virtual assets cannot be guaranteed.



## Reasonable Distribution of Profits

Global players generate huge social effects and economic profits when playing, most of which are divided by the head companies of the game industry. Also due to the centralized nature of the game itself, the security and openness of player assets have no guarantee, which means game platforms can arbitrarily occupy and tamper with players' data.

## Introduction to CryptoJOY Global Game Service Platform

**CJ (Crypto Joy)** is a game service platform that restore the value of games through **blockchain technology and decentralized mechanism**. CJ platform established core ecosystem with 'universal credits, permanent records, real props, and behavior values' This ecosystem is build,shared,

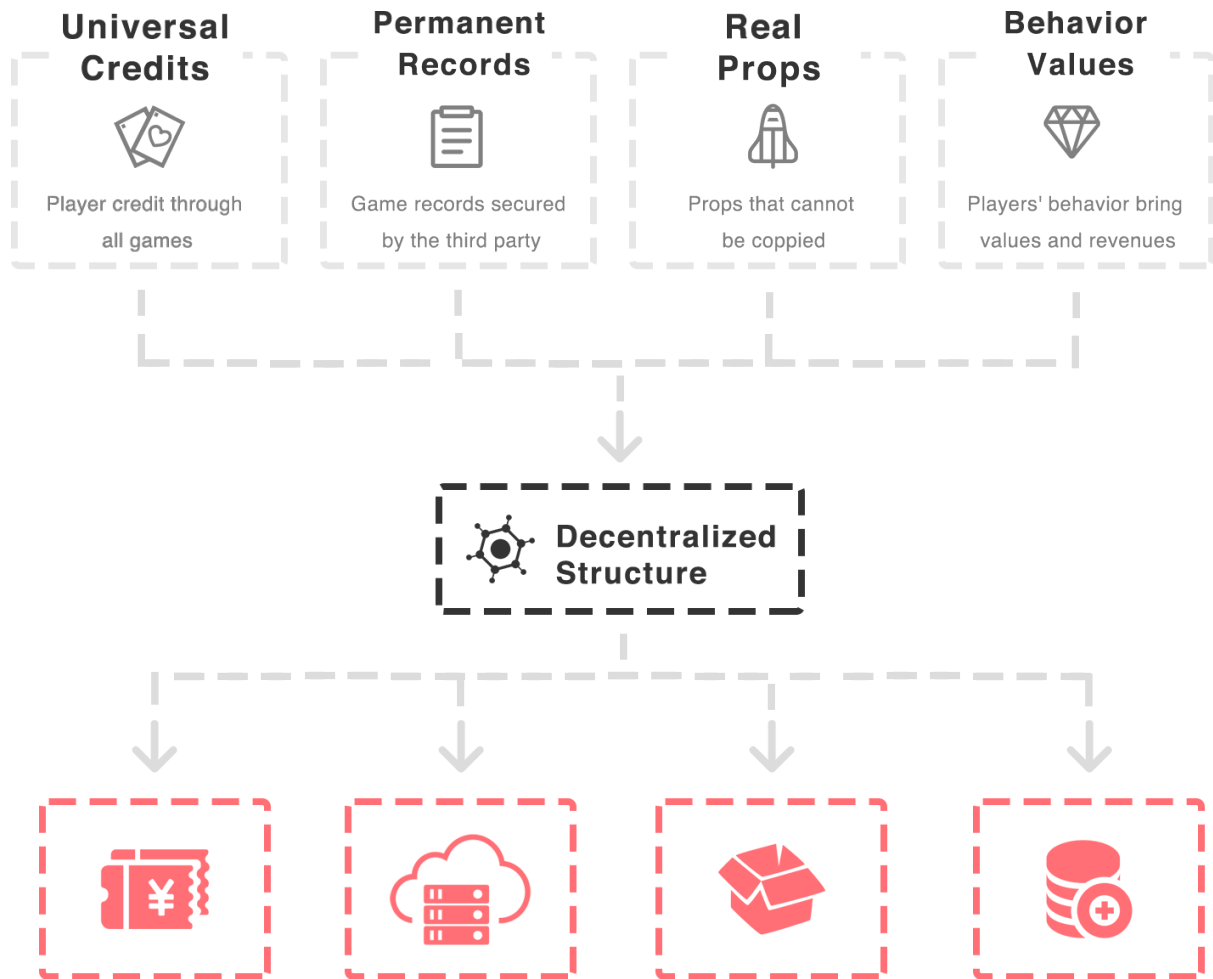
and won by a self-governed game alliance community. Based on **‘mining by participation’**, CJ will rebuild the relationship between game makers and game players through the core ecosystems and set up dapps to provide necessary support and coordination for the decentralized operation of the whole system.

**CJ (Crypto Joy) believes playing itself is full of business values, so all game players should enjoy participating as a way of ‘mining’.** Participation involves **data storage, spreading, participation, and trade**. CJ will issue CJT (CJ token) by PoW, and **release and authenticate token, and cognize token values** to incentivize data flow and accumulation, increase the enthusiasm of player and the add more values to the games.

**CJ token (CJT)** is the underlying token that serves CJ game service ecosystem and every role in it. Based on ‘mining by participating’, the system reaches a consensus on game data service, breaking the island effect of games and recycling the services for players.

CJ will completely solve many problems in the current game industry, such as **the early game users are difficult to obtain; abusive usage of game plug-ins; game virtual assets cannot be guaranteed; low game player income; short game life cycle, etc.**

## CJ Four Ecosystems



## New Authentication of Game Behavior

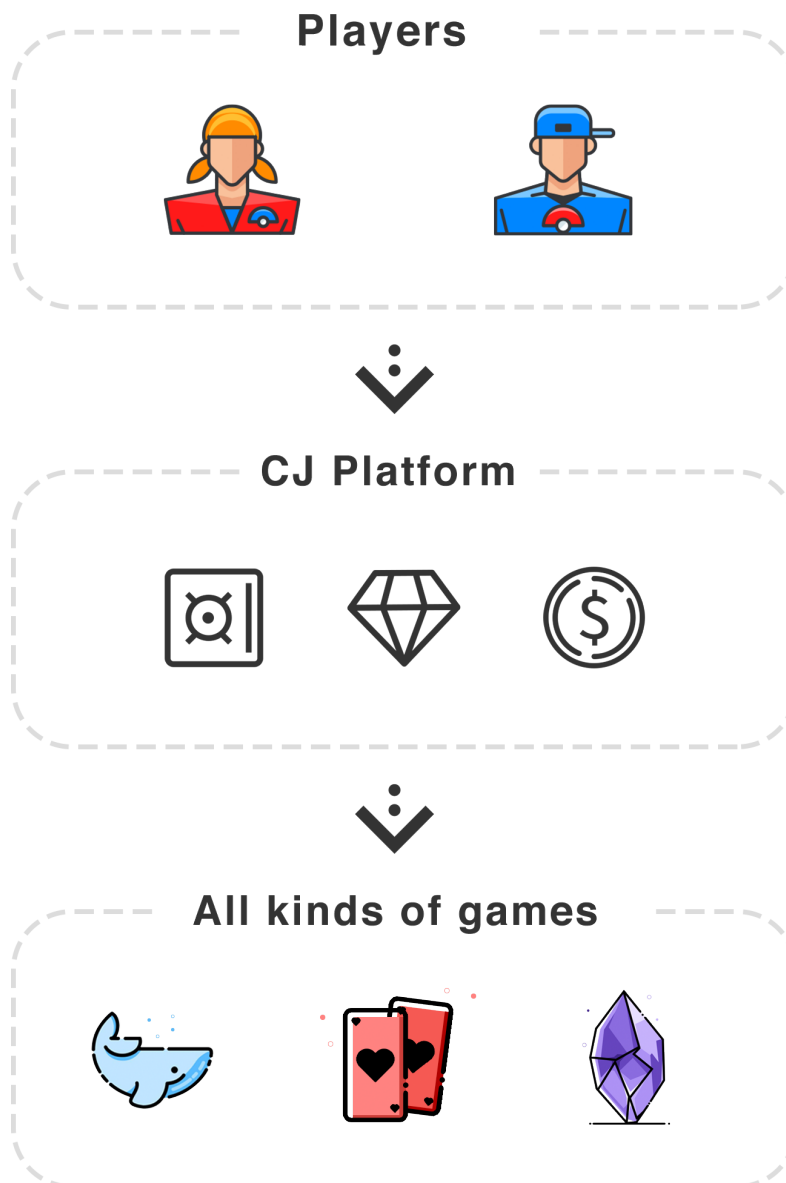
CJ reshapes the value of the game through four major ecosystems. Players gain the corresponding value through

game behavior and establish a refreshed win-win mode between game platform and themselves.

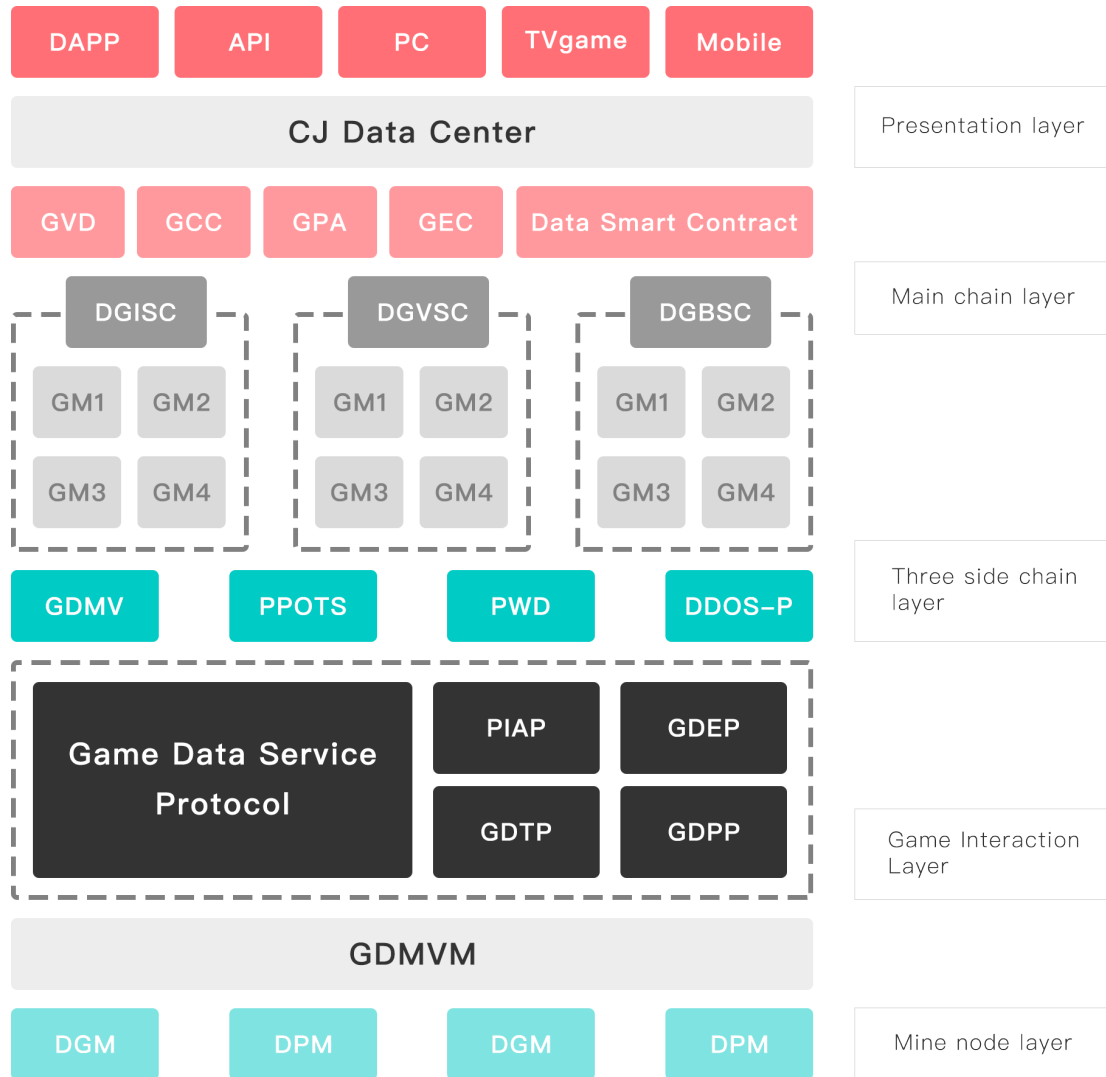


## CJ Platform Structure

CJ game service platform will become the link between the game and players. The decentralized technology will record the player-related game data in real time, ensuring that all data cannot be tampered with and at the same time authenticating the game value.



# Overall Technical Framework



Based on the experience of developing multi-centered platforms and decentralized platforms and the understanding of the game services, CJ system will be divided into five layers. The DGM and DPM mining nodes will provide

computing power to the game platform and for players in the entire ecosystem. And the game interaction layer will interact with DGISC/DGVSC/DGBSC, three major service sidechains, and dynamically allocate game-related data.

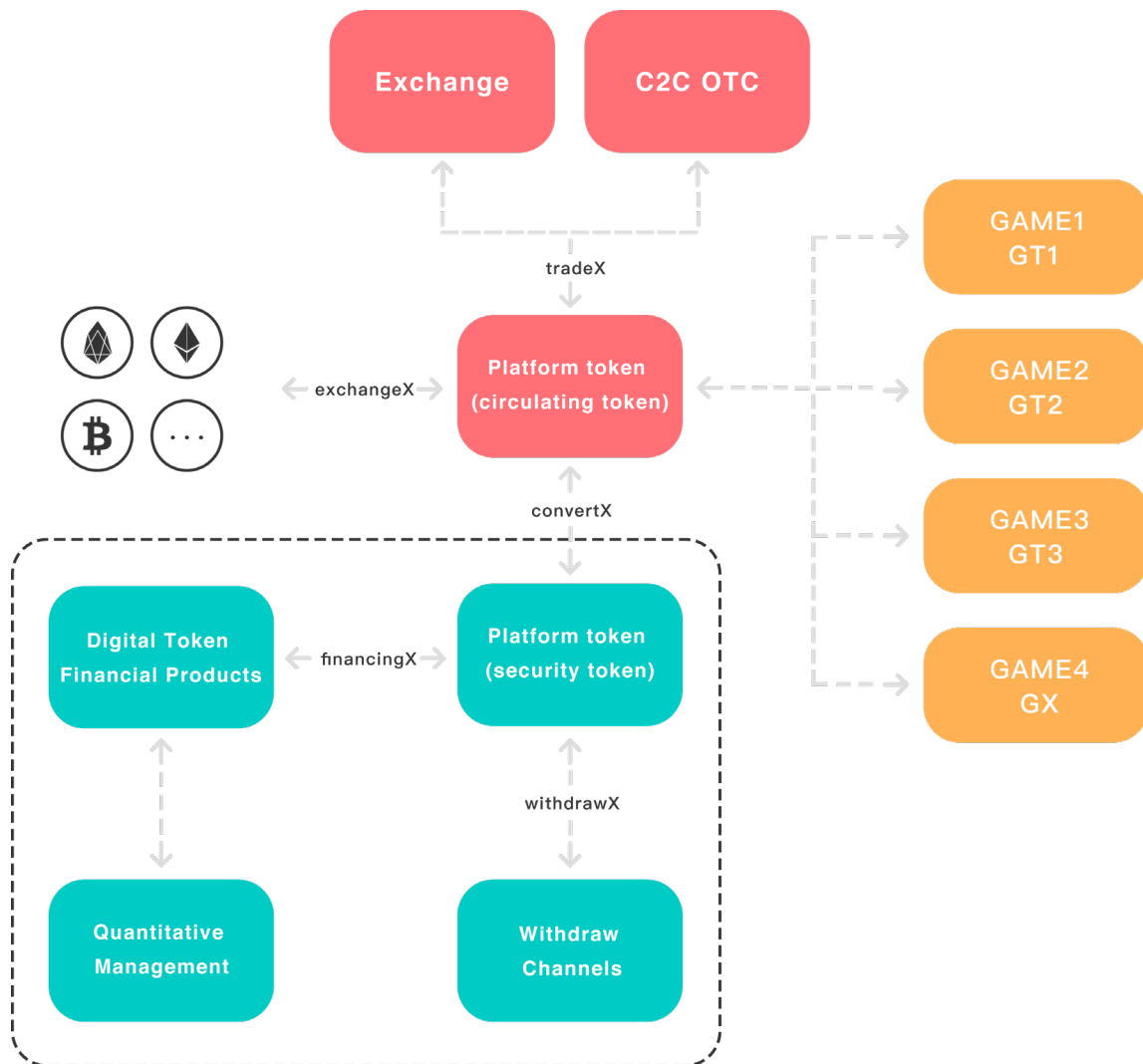
The DSC will provide the game service strategy for the CJ platform. The data processing results are verified and put on the main chain, and finally the content is displayed through the presentation layer.

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## CJ Platform Token System

CJ game service platform consists of four modules, namely, exchange module, transaction module, game module, and appreciation module. CJ platform has two types of tokens—circulation token CJT and platform token CJS. Game players obtain CJT through the exchange module and automatically convert to GX when entering a specific game. GX generated during the gameplay can be converted to CJT according to certain conversion strategies. Players can choose to convert CJT into other digital currency through the trading module or exchange module; or convert CJT to CJS to obtain the benefits of the platform and become miners by ‘holding’ them.





## CJ Double-Token System



### Circulation token of the platform

CJT is the only circulation token on CJ platform. It is the medium of all digital assets on CJ platform. Players can other tokens to CJT and exchange for virtual token GT in games.



### Valuation token of the platform

CJS is the valuation token of CJ platform and the representation of the overall value of what CJ platform can produce. The ratio between CJS and CJT will be 1:1. Players can convert CJT to CJS and share the dividend of the platform revenue in a certain proportion for a certain period.



### The Single Game Token

GT is an independent token for every game and the designated circulation certificate in the game. GT is obtained

through CJT. The player will gain or lose GT when playing. Players can also convert GT to CJT at any time. The increase or decrease of GT is the internal logic of the game.

CJ aims to create a safe, efficient and transparent game-based token economy that allows the game platform and players to form a community of common interests and share mutual success. CJT and CJS double-token system is CJ's foundation to realize common community built on game values. The two different functional tokens plus the independent in-game token will balance the entire game value community.

## A Clear View of Token Circulation



The above picture shows the whole process of playing the game on the CJ game service platform as a player. Players first convert standard tokens to circulating token CJT and later to GT in the game, which after a game period can be converted to CJT based on his/her own operation, and finally convert back to standard tokens or platform token CJS.

## CJ Platform Service Procedure



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### On-board Application

Submitting game details according to the application rules.



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### On-board Audit

CJ game decision-making council audit every submitted game.



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## Vote to List

CJS token holders vote to decide whether submitted games can be listed or not.



## Data Synchronization

Approved games then begin to synchronize data with the platform and establish their own private chains.



## Running the Game

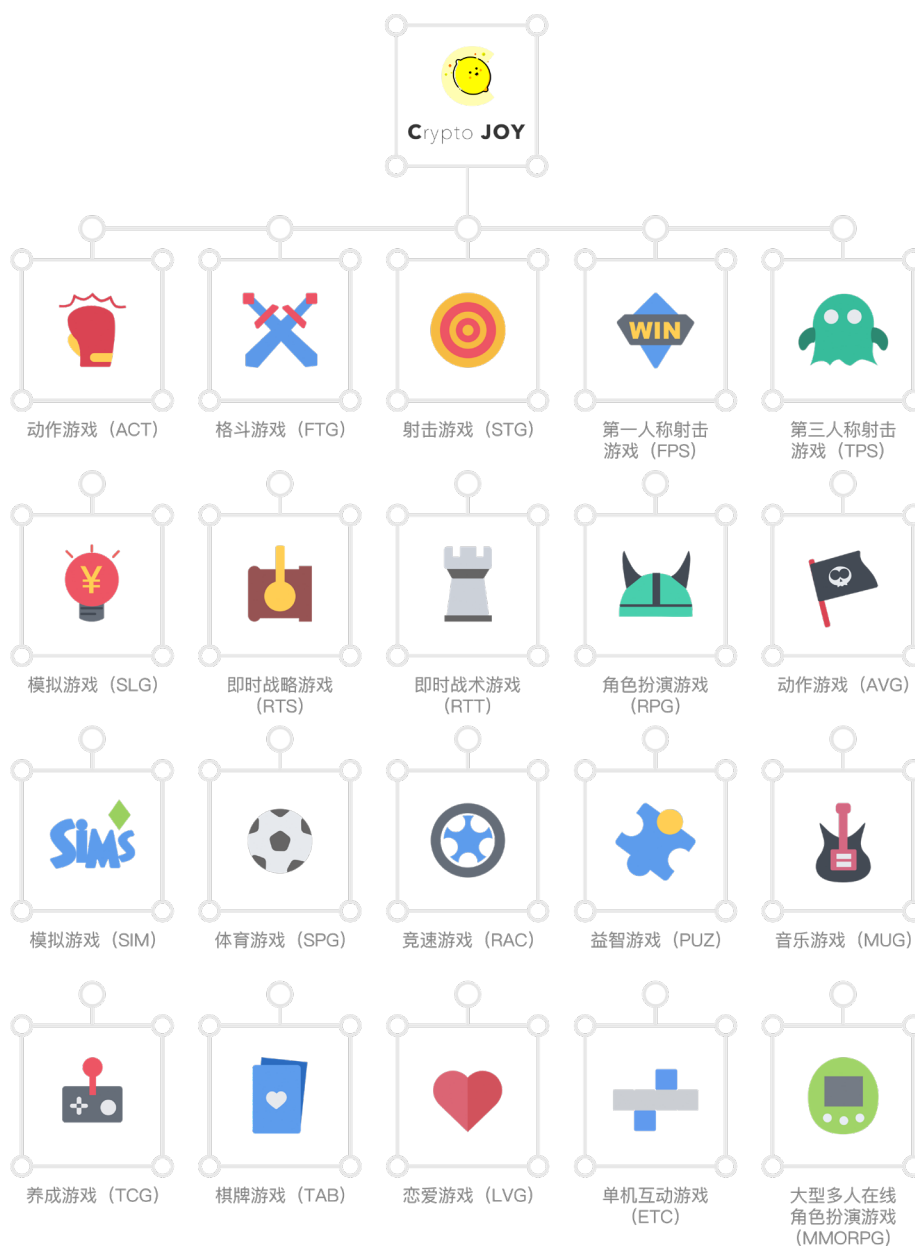
After the data is synchronized, the game will be tested for three weeks and later enter official running.



## State Monitoring

All games running on CJ platform will be subjected to status monitoring by the main chain in order to prevent bugs in data synchronization or individual game errors.

## Supported Game Types



## Games ready on-board



**Funny Up**



**Community  
Fishing Joy**



**Let's Chess**



**Community  
Co-mining**



**Oracle Master**

## CJ Technology Advantage



SmartMesh serves as P2P communication network for games



Sharding of the game data



Game data countdown refresh



Zero knowledge proof



Utopia game community self-governance mechanism



Cross-chain game credit counting



Game state Oracle



Virtual prop authentication



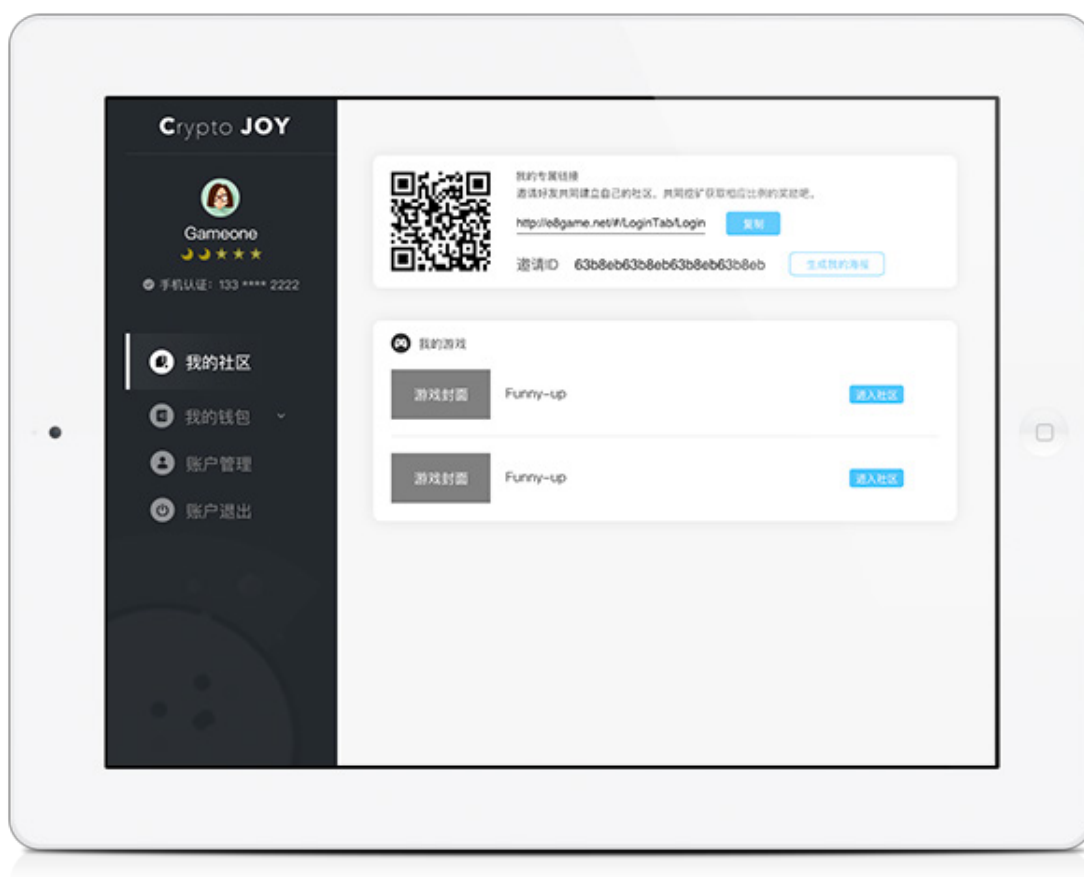
High TPS buffer layer





AI game monitoring mechanism

## Platform Interface



Game  
Center



Membership  
Center



Data  
Platform



Credit  
Warehouse



Credit  
Exchange



Game  
News



Mining by  
Playing



Decentralized  
Data Search Engine



Credit  
Community



Game  
Communication



Game  
Rating

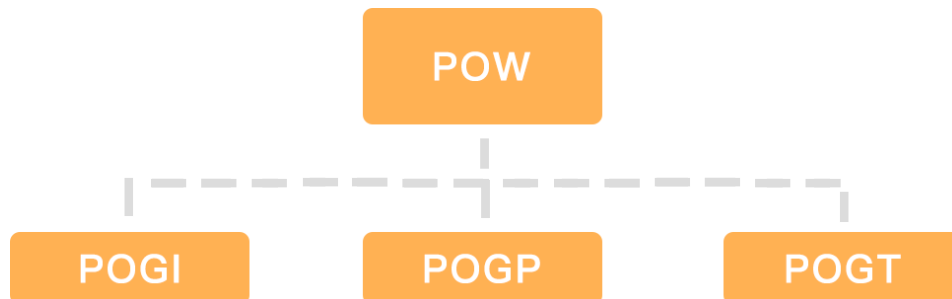


Game  
Store

## CJ Consensus Mechanism



CJ adopts POW + DPOS consensus mechanism.



CJ POW consensus is formed by POGI/POGP/POGT.

## DPOS



Since CJ is public chain in a particular industry, its super nodes are likely to be global game service platforms and regional service providers in the early stage. Therefore, CJ draws on the EOS super node model and designates 21 initial super nodes as the consensus nodes. These nodes will be elected by global game service platforms and regional service providers.

## Dynamic Mining Model

### POGI

Proof of Game Invitation

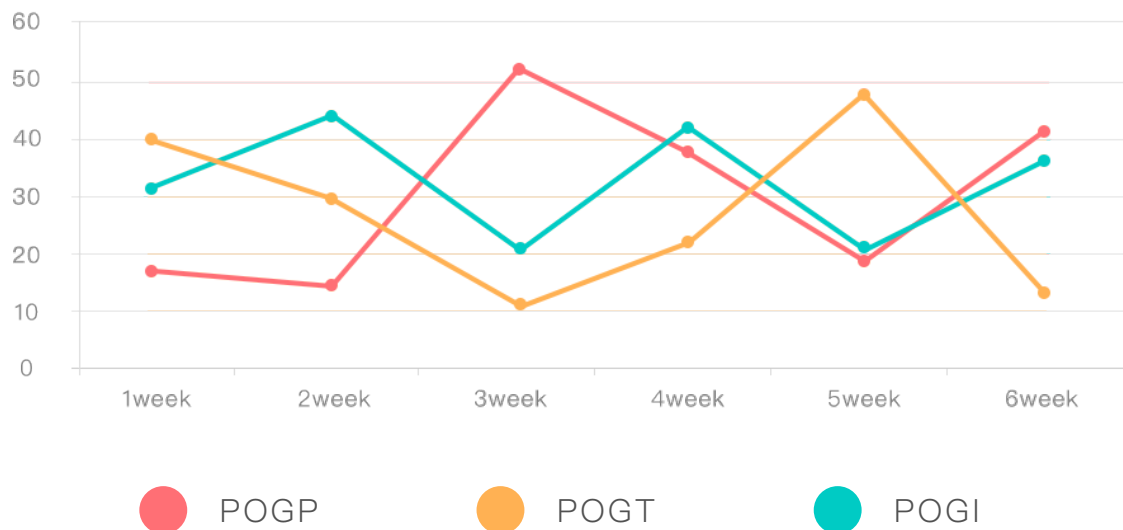
**POGP**

Proof of Game Participation

**POGT**

Proof of Game Trading

CJ has a very complete model of token economy. Based on the original POW and the rules of the game industry, CJ derives three sub-POW mechanism, and the dynamic force compensation mechanism (DFCM). All these mechanisms together regularly (currently by week) distribute CJT to global players.

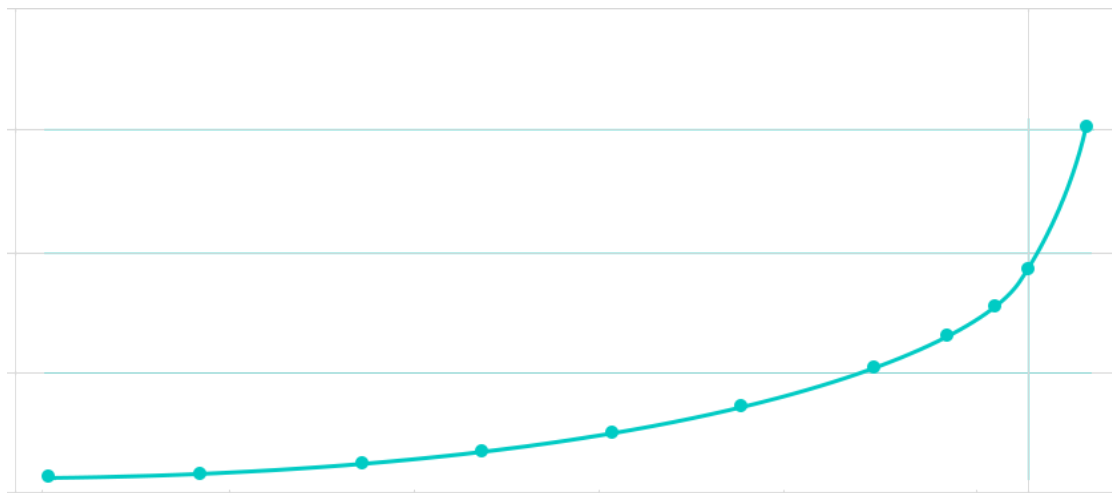


## Value Forecast of Two Tokens



CJT Value Curve

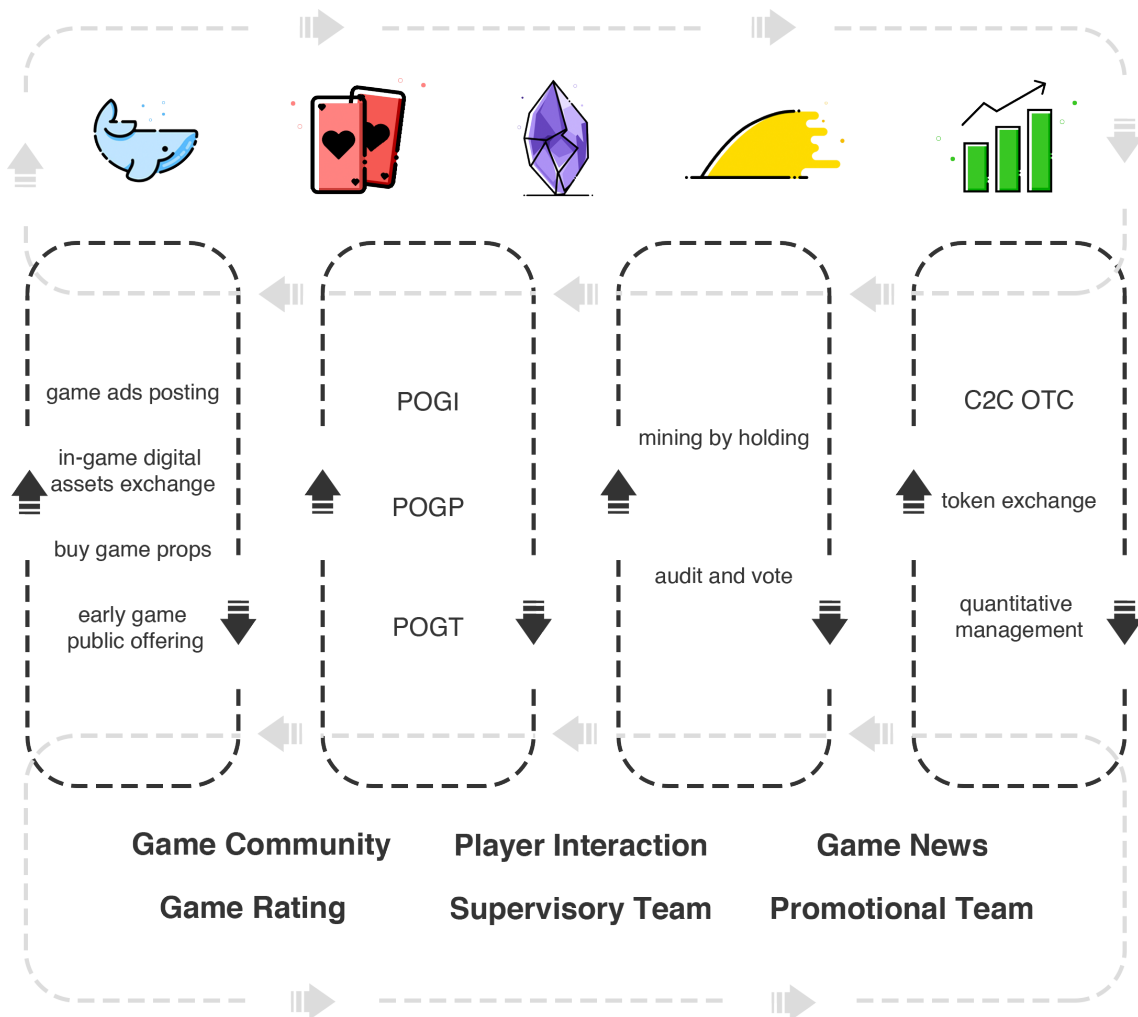
As a circulating token on the platform, CJT value is likely to see a rapid increase at the beginning, and gradually stabilize in the long run so as to guarantee the liquidity of the platform.



CJS Value Curve

As a valuation token, CJS value growth will accelerate with the development the entire platform. Besides, when the demand and the liquidity of circulating CJT increases, the value of CJS will sustain to appreciate.

## Token Circulation Orientation



CJT plays a critical role in CJ service platform. Any service on the platform will produce or consume CJT. Every CJ module will have its own orientation facilitating the token flow.

## CJ Revenue Model



GAS Fee from CJT



Game Listing Fee



Ads Income



Game Incubation



Big Data & AI

## GTO & UCA

### Game Token Offering

GTO (Game Token Offering) is the funding method of CJ platform. Game Makers can post their development plans on CJ platform and issue GTO with standard tokens or CJS. Collected funds will be used to further the development of the game and operation. Players can exchange or use the game tokens when game goes on-line.

GTO model will quickly acquire initial players while GT sets an access barrier. This is a way to avoid a cold start and build an important eco-foundation for the game life-cycles.

To ensure the compliance and security of GTO, all the funds collected by games on the platform through GTO will be supervised by GTO Supervisory Council.

## Utopian Community Autonomy

Utopia is meant to be a ‘nowhere’ or a ‘good place’, extending to an ideal where all the property is for the public and the people are equal, on-demand distribution is implemented, and officials are elected by the public. However, this is too good accomplish.

UCA (Utopian Community Autonomy) is a self-governed game community on CJ platform. Every game maker and player can establish their own UCA on CJ and govern the community according to the EOS node governance mode.

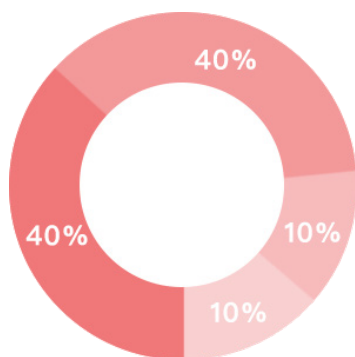


There are normal nodes (sailor), standby nodes (cox), super nodes (captain) and self-governing council (board of directors) sustaining the running of the entire community.

## Token Distribution

CJT Total Amount: 10 billion

Holders	Share (100 million)	Lock-up	Holding Plans
Founding team	10	3 years	Unlocking on the due date for development and operation
Foundation	10	3 years	Unlocking on the due date for investment and charitable affairs
Public Offering	40	1 year	The Platform will set a periodical purchasing plan for the whole year, with an equal quota of CJT release each period at an incremental price according to the contract.
Ecosystem Contribution	40		The Platform will release CJT regularly according to the POGI/POGP/POGT mechanism.

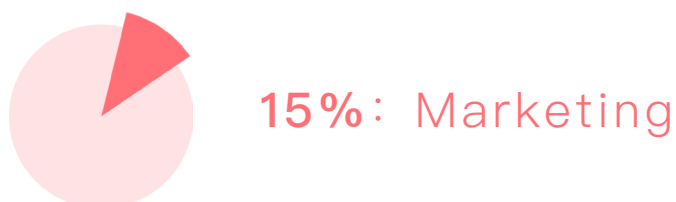


- 40%: Ecosystem Contribution
- 40%: Public Offering
- 10%: Founding Team
- 10%: Foundation

## Fund Usage



To synchronize data on-chain, CJ decentralized digital assets platform will put a lot of resources on technology development.

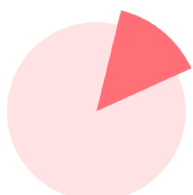


Based on the design of the CJ node and the user acquisition model, our marketing budget will be lower than many other projects and service platforms. This amount is sufficient for the ongoing platform marketing activities and reaching more investors through traditional marketing channels.



40% : Core Development

The core development includes CJ dapps, distributed data storage architecture, and CJT-based smart contract drive. A large proportion will be spent on the synchronization of game data and the deployment of super nodes.



20% : Daily Operation

To ensure that day-to-day operations can proceed smoothly throughout expansion of the organization, we will pay more attention to the operation process and recruitment needs.



5% : Compliance

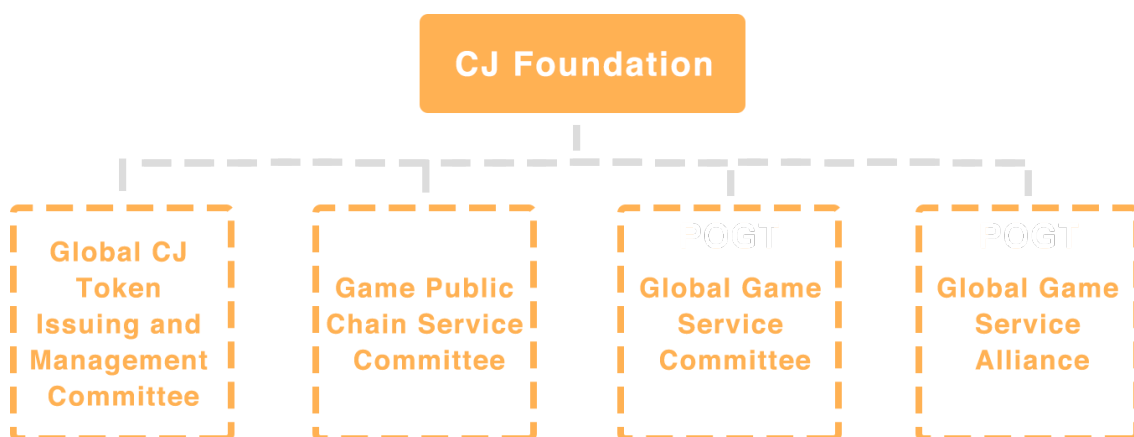
Compliance is the key to the long-term success of CJ network. We will allocate the corresponding proportion to

meet the compliance requirement and guarantee every business is carried out in accordance to the legal rules and requirements.

## Foundation Structure

### CJ Foundation Structure

Founded in July, 2018 on Cayman Islands, CJ Foundation is a digital currency service non-profit organization. The Foundation will be devoted to the development of CJ token and the relevant applications, providing guidance on technology research, community operation and future exchange. The Foundation will promote the development of CJ platform, game operation monitoring, and the node maintenance and ensure all services are carried out in compliance with local law and regulations and build a proper ecosystem.

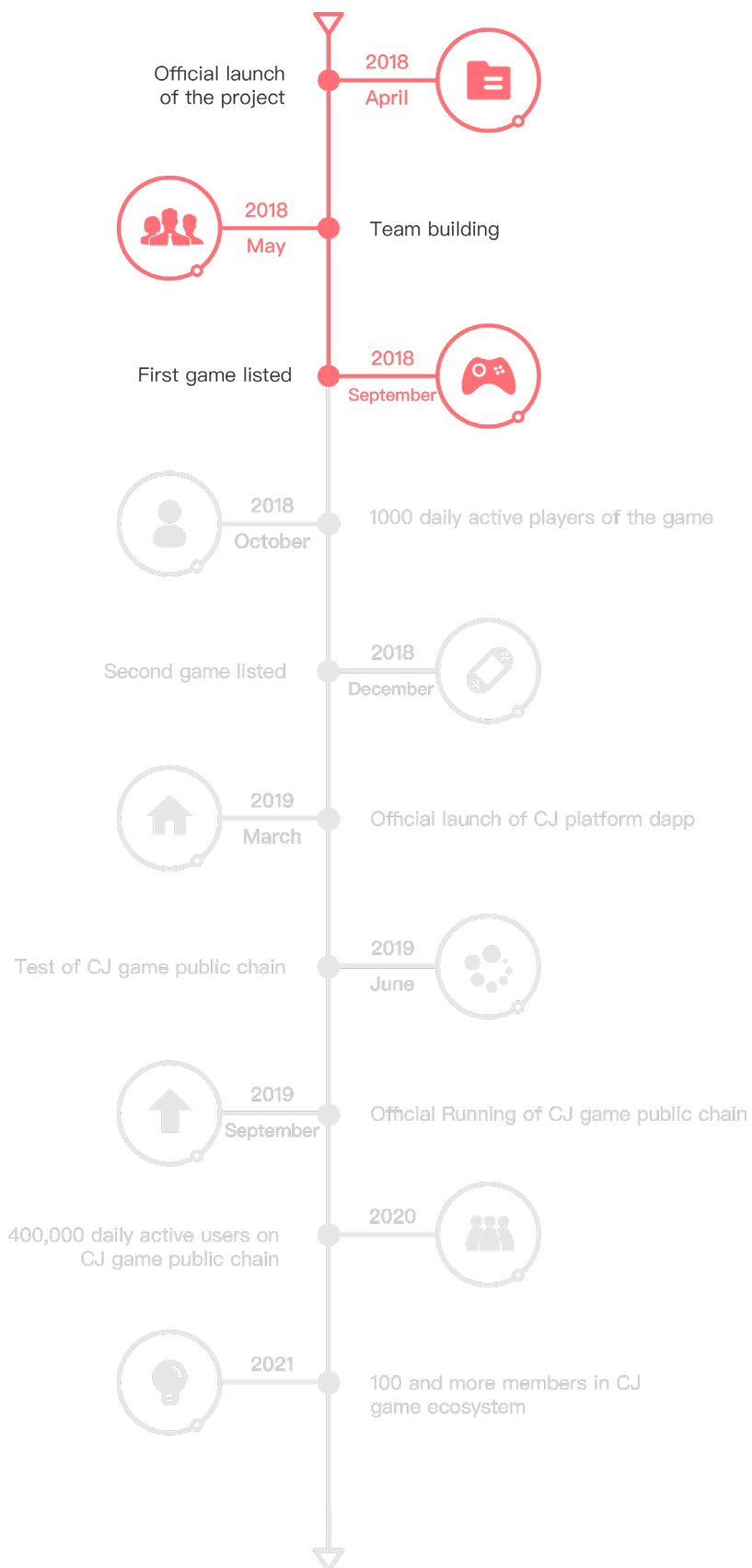


## Focus of the Foundation

1. Establish norms and standards for game asset service ecosystem.
2. Launch, encourage and support game asset service ecosystem and the relevant communities.
3. Promoting more games get listed on CJ platform and set up long-term cooperation with these games, laying a solid foundation for a comprehensive service platform for players in the future.
4. Guarantee the legitimacy of global game assets.

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## Development Roadmap



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## Disclaimer

This project will not organize any public promotion or advertising promotion activities in any media before and during the public offering. Please make prudent decisions before participation.

This document is for informational purposes only and does not constitute any investment opinion or opinion regarding the future sale or purchase of a native digital asset, nor is it a contract or commitment of any kind.

Once participating in private placements and sales, investors should understand and bear all the risks, and are willing to accept all the corresponding results or consequences. The platform clearly stated that it will not be responsible for any direct or indirect losses for investors.

The native digital assets involved in this project are an encrypted digital code used on the platform and do not represent equity, bonds, right to yields or ownership of the platform.

## Terminologies

- 1.CJ (Crypto JOY)
- 2.CJT (Crypto JOY Token)
- 3.CJS(Crypto JOY Securities Token)
- 4.PPOTS (Player Proof Of Time and space )
- 5.DSP(Data service protocol)
- 6.DMV(Data multiple validation)
- 7.GVD(Game value distribution)
8. GPA(Game Player allocation)
9. GEC(Game ecology construction)
- 10.GDMVM(Game DATAexchange MATRIX Virtual machine)
- 11.DGM(Decentralized GAME mining machine)
- 12.DPM(Decentralized Player mining machine)
- 12.PIAP(Pleyer identity authentication protocol)
13. PWD(Player witch decision)
14. DDOS-P(DDOS prevention)
15. GDEP(Game Data encryption protocol)
16. GDTP(Game Data transmission protocol)
17. GDPP(Game data proofreading protocol )
- 18.DC(CJ data center)
19. DGISC(Distributed game integration storage center)
20. DGBSC (Distributed game behavior storage center)
21. DGVSC(Distributed game value service center)