



# PolkaWar Whitepaper

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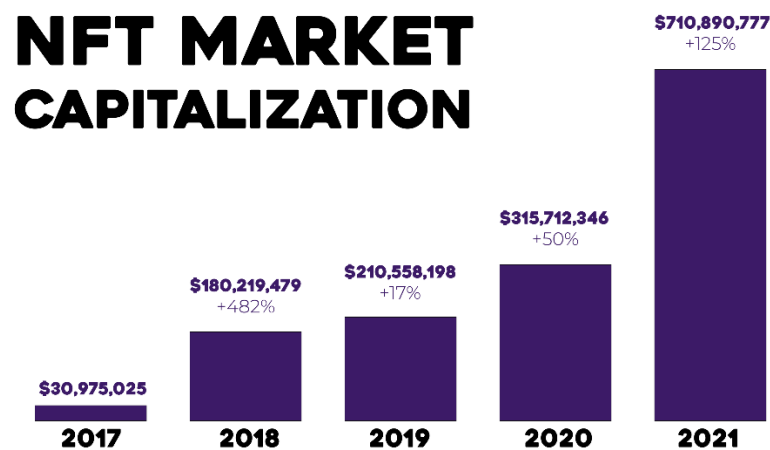
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# INTRODUCING POLKAWAR

## NFT Market and NFT Gaming Overview

Non-Fungible Tokens or NFTs have become a common name across crypto communities and projects in the first quarter of 2021. Their market cap has been steadily rising and currently stands at \$20B. It is slated to grow massively in the coming future as the blockchain gaming and the art user base expands. For this reason, NFTs will gain further adoption and usage with time.



Binance the world's largest centralized exchange launched an NFT marketplace in June 2021, signalling high demand and great potential of the NFT marketplaces. The NFTs potential is truly unleashed, when it comes to gaming. It's an area, where the current projects lack behind in. The current statistics show that less than 20% projects are related to gaming with most projects having mere concepts and no working products. We realize that the NFTs combined with gaming will be the catalyst required for mainstream adoption and will contribute to the development of the general nascent NFT market, in the coming years.

## PolkaWar Overview

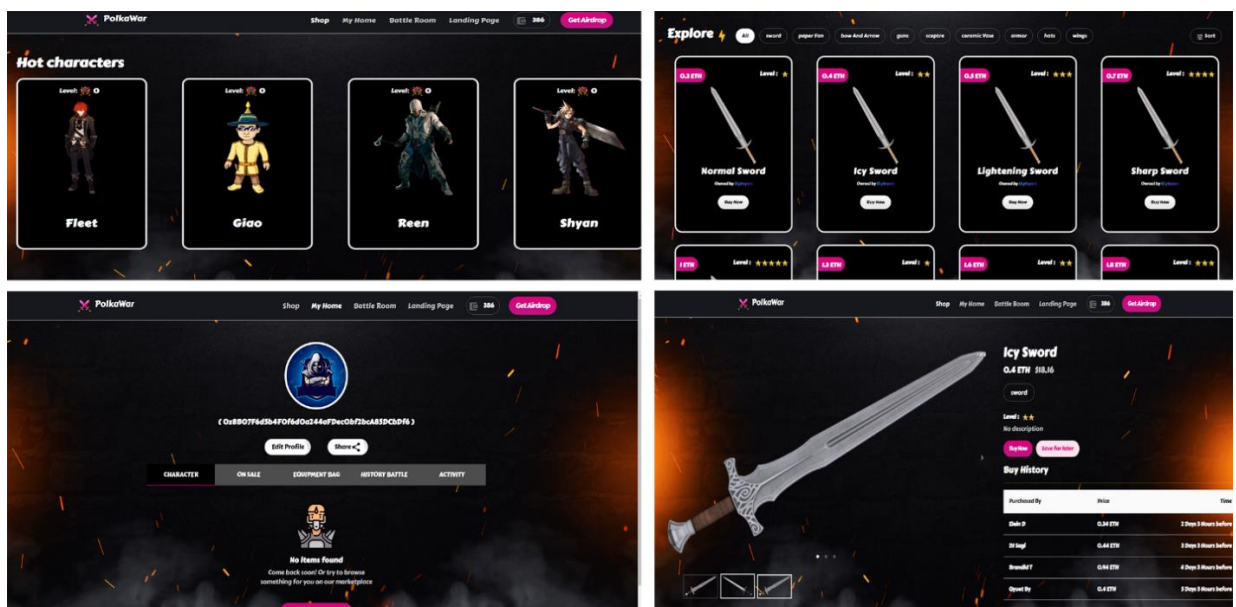
**PolkaWar** is a decentralized fighting game platform on the blockchain network. Inspired by the NFT subfield, PolkaWar will create a vivid fighting game world. Players will build character systems with weapons and equipment with different levels, to engage in combat with other players; participate in quests in the game as well as buy and sell items in the marketplace.

The game system will have 3 types of characters including Warrior, Archer and Magician. Weapon system includes: **Sword, Big Knife, Bow & Arrow, Gun, Tessen, Scepter, Magic Vase**. Equipment system includes: **Armor, Helmet, Wing, Mount**. Each item will be designed according to the level upgrade model, with different stats and advancement conditions for each level.

Unlike other NFT game platforms, PolkaWar will also include an in-game **marketplace system**, allowing players to buy, sell and auction items with each other. It's a way for the players to employ monetization and turn their valuable time/skills into a money generation opportunity for themselves. Consequently the higher the level/stats of the characters, weapons, and equipment, the more price they can fetch.

In addition, players can also redeem their NFTs or gaming items for real world objects through the **PolkaWar Logistics system**. The players are required to bid against other players for a chance to win and own these items. Through the logistics system, PolkaWar team will ship the product directly to the buyer's address. This promises to be a novel and very attractive function in the NFT marketplace field

PolkaWar status: Game MVP Ready



## Competition

Here are some major projects and also PolkaWar's direct competitors, related to NFT Gaming and NFT marketplace.

Project Name	Sector	Market Value (5/2021)
Rarible	Marketplace	66M
Axie Infinity	NFT Gaming	500M
Sandbox	NFT Gaming	430M

# KEY PRODUCTS

## PolkaWar Realm

**PolkaWar Realm** is an NFT-based decentralized game. Everyone can create, build their own characters, battle to have fun and earn more profit.

### Character system

Each character is an NFT. All characters have these basic properties:

- Health Points (HP)
- Physical attack attributes
- Magical attack attributes
- Physical defense attributes
- Magical defense attributes
- Attack speed attributes
- 

There are 3 character classes, each class plays a different role in the game.

#### ❖ **Warrior**

- The Warrior is a character with high strength and the most powerful one in the PolkaWar game.
- Weapons: Sword, Big Knife, Tessen
- *Index*
  - Health Points (HP): 30
  - Melee Points (MP): 21
  - Physical Attack (pAtk): 6
  - Magical Attack (mAtk): 0
  - Physical Defense (pDef): 7
  - Magical Defense (mDef): 7
  - Attack Speed (spd): 0.7 hit/s



### ❖ **Magician**

- The magician is the character with the mysterious magic, supernatural tricks and inherits the power of the evil darkness.
- Weapons: Magic Vase, Sceptre
- *Index*
  - Health Points (HP): 27
  - Melee Points (MP): 22
  - Physical Attack (pAtk): 2
  - Magical Attack (mAtk): 10
  - Physical Defense (pDef): 4
  - Magical Defense (mDef): 6
  - Attack Speed (spd): 0.3 hit/s



### ❖ **Archer**

- The archer is a character with fast attack speed and possesses angelic beauty.
- Weapons: Bow & Arrow, Gun
- *Index*
  - Health Points (HP): 29
  - Melee Points (MP): 25
  - Physical Attack (pAtk): 9
  - Magical Attack (mAtk): 2
  - Physical Defense (pDef): 4
  - Magical Defense (mDef): 4
  - Attack Speed (spd): 1 hit/s



When unlocking a new character, you can choose the class first, but your unlocked character will receive a random factor  $x$ . The character's base properties depends on this factor.

$$\text{baseProperty} = \text{classProperty} * x$$
$$0.9 \leq x \leq 1.1$$

So, it's hard for two characters with identical properties to exist in the game.

Each character has its own level. Higher level means a stronger character.

$$\text{property} = \text{baseProperty} * \text{level}$$

Every new character will begin with level 1. There is no higher level limit. The characters can be leveled up if they reach enough experience, which can be earned by participating in battle.

The experience amount required to level up is 100 at level 1 and will be in multiple of 1.2 after attaining the first level.

## Battle system

Every users can earn more experience for characters and even profit by participating in battle. The battle system operates by employing a smart queue mechanism. When an user clicks "Battle", system will find his competitor who has the closest properties for battle in queue by first come first serve (FCFS) mechanism. In case, the system cannot find anyone, it adds a record to the queue with the user's character information and locks an amount of USDC from his balance. Then, the user can wait for a competitor to become available. When the battle ends, winner will get all USDC collected from both parties and locked in escrow. In the battle between  $a$  and  $b$ , the winner will be decided by comparing their properties by this formula:

$$Sa = (\text{totalP} + \text{totalM}) * a.\text{spd} / b.\text{hp}$$

$$\text{totalP} = a.p\text{Atk} > b.p\text{Def} ? a.p\text{Atk} - b.p\text{Def} : 0$$

$$\text{totalM} = a.m\text{Atk} > b.m\text{Def} ? a.m\text{Atk} - b.m\text{Def} : 0$$

$Sa > Sb \Rightarrow a$  win. In case  $Sa == Sb$ , there is no winners, USDC locked will be returned.

The experience characters will receive after battle depends on their level, determined by this formula:

$$Ea = (b.\text{level} / a.\text{level}) * 100$$

So if your character has a lower level than your competitor, you will receive more experience. This allows for a fair game play by allowing lower level characters to advance faster.





## Equipment system

It's not only the experience level, which determines the strength of a character. The users can mint, upgrade and collect more equipment to increase the power of their character. This increases the chances of coming out victorious in a battle. Every item is an NFT.

Each equipment has its own properties, which enhance or add to the character's properties once utilized or deployed by the character. But note that each character can wear only a specific amount of equipment at one time. So, you need to choose the most suitable equipment for your characters.

Weapon and equipment	Category	Level	Base Index
	Sword	1 (up to level 5)	Base Damage: 30 Bonus: +7% Accuracy: +5
	Big Knife	1 (up to level 5)	Base Damage: 32 Bonus: +5% Accuracy: +4
	Bow & Arrow	1 (up to level 5)	Base Damage: 29 Bonus: +9% Accuracy: +4
	Gun	1 (up to level 5)	Base Damage: 36 Bonus: +5% Accuracy: +3
	Tessen	1 (up to level 5)	Base Damage: 26 Bonus: +8% Accuracy: +4
	Sceptre	1 (up to level 5)	Base Damage: 31 Bonus: +6% Accuracy: +3
	Magic Vase	1 (up to level 3)	Base Damage: 2 Bonus: +6% Accuracy: +1



	Armor	1 (up to level 3)	HP: 10 MP: 6 Protection: +5
	Wing	1 (up to level 3)	HP: 7 MP: 5 Protection: +3
	Helmet	1 (up to level 3)	HP: 5 MP: 3 Protection: +2
	Mount	1 (up to level 5)	Energy: 500/500 Base Damage: 50 Bonus: +5% Accuracy: +10 Take damage to the owner: +60

Maximum equipment a character can wear at the same time:

- Weapon: 1 (*Magician can use both Magic Vase and Sceptre*)
- Armor: 1
- Helmet: 1
- Wing: 1
- Mount: 1

The equipment properties can also be increased by levelling up (maximum 5 levels) or upgrading them. Their appearance also depends on the level. Generally, the higher the level, the more aesthetic and cooler the appearance. If you want to level up your equipment, you must burn your *gems*, which you can earn by staking the native PWAR tokens. Please note that higher amount of burnt gems will provide higher probability of success. These gems are expected to be ERC20 tokens, which can be traded or acquired from the marketplace.

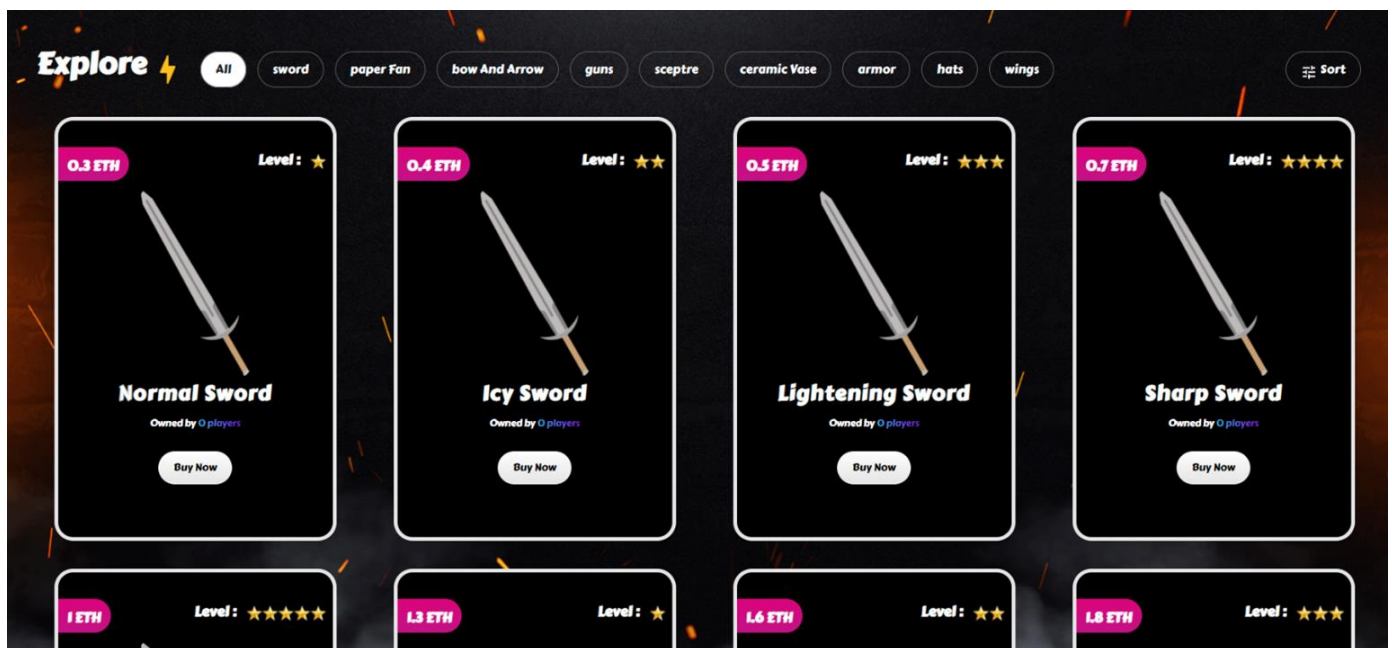
## PolkaWar Marketplace

*The PolkaWar marketplace is the main trading centre or market for the in-game NFT items. It's operated by an automated smart contract and it requires the usage of PWAR tokens as fee. These tokens are later burnt to create a positive loop, directly impacting the price positively.*

The marketplace generally consists of weapons and equipment, belonging to the PolkaWar realm. These items are generated / provided by the PolkaWar blockchain NFT based game and are increasingly diversified in terms of quality and quantity.

Unlike other NFT marketplace platforms, PolkaWar Marketplace does not allow players to create their own NFTs, but requires them to collect and trade, according to the available items in the system and possessed by their in-game character. These items include weapons and equipment with different levels. For example: the player buys a level 1 sword weapon. During the game, the player can upgrade it to level 2. The player can place orders to sell or auction his sword on the market to generate profits. The main currencies used on the marketplace are ETH and PWAR tokens.

To participate in trading on the market, players are required to own a certain amount of PWAR tokens, used as fees and collateral. The fee amount is equal to 1% of the transaction amount and the mortgage amount to sell the item is 10% of its value. This is one of the mechanisms used to increase the value of the PWAR token.

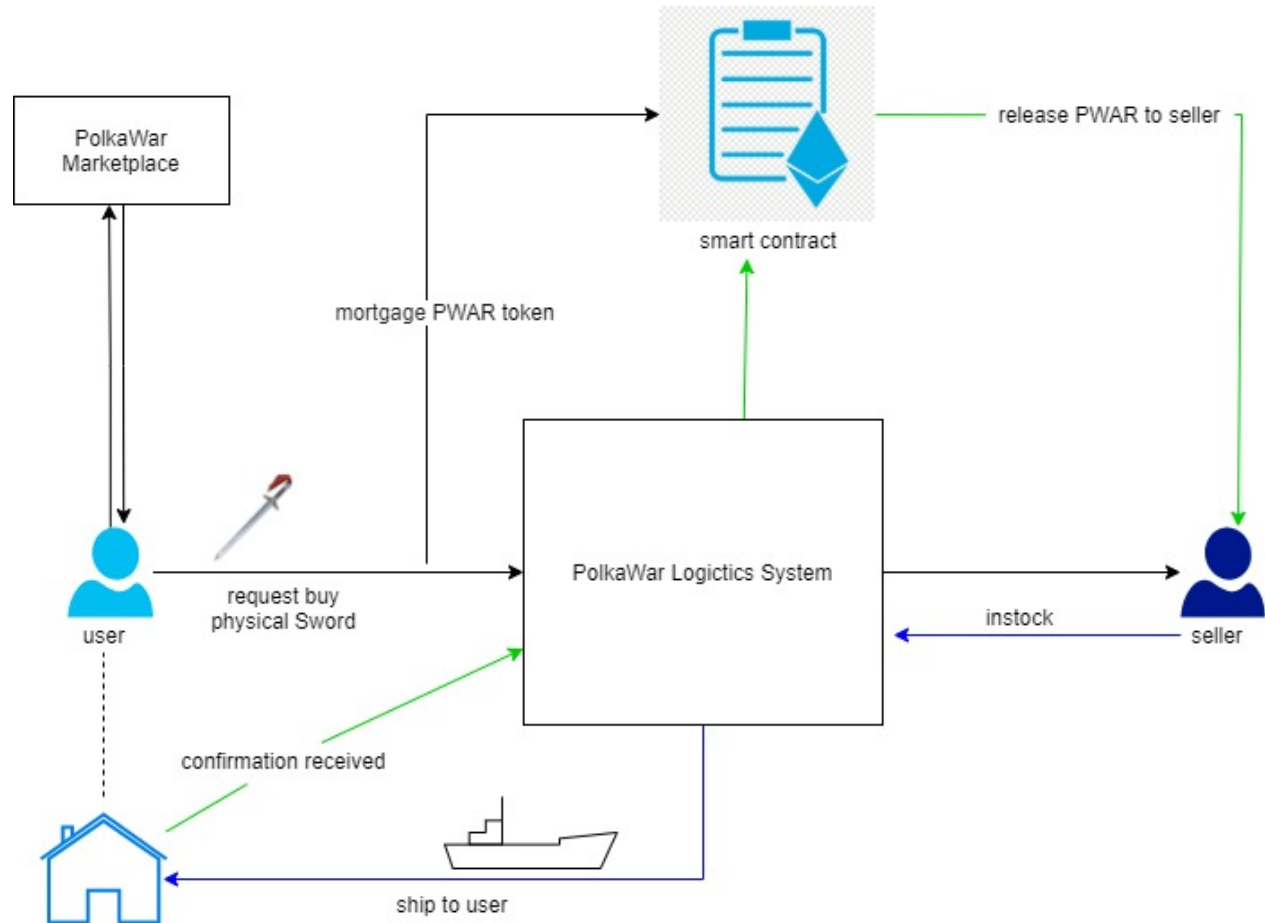


Initially, the marketplace will be built on top of the Ethereum blockchain. But, the goal of PolkaWar team is to want to build a marketplace on many different blockchains, such as Binance Smart Chain, PolkaDot etc. This is a roadmap goal and will be worked upon. Through cross-chain solutions, players can transfer & own NFT items across various blockchain platforms and use it on other marketplaces of the same ecosystem.

## PolkaWar Logistics

**PolkaWar Logistics** is the system to convert NFT items to physical items. Through it, users can own their in-game items copy in the real world too. All NFT items on the market can be converted to physical items. Example: You have a sword (NFT item) level 1 and you want to own

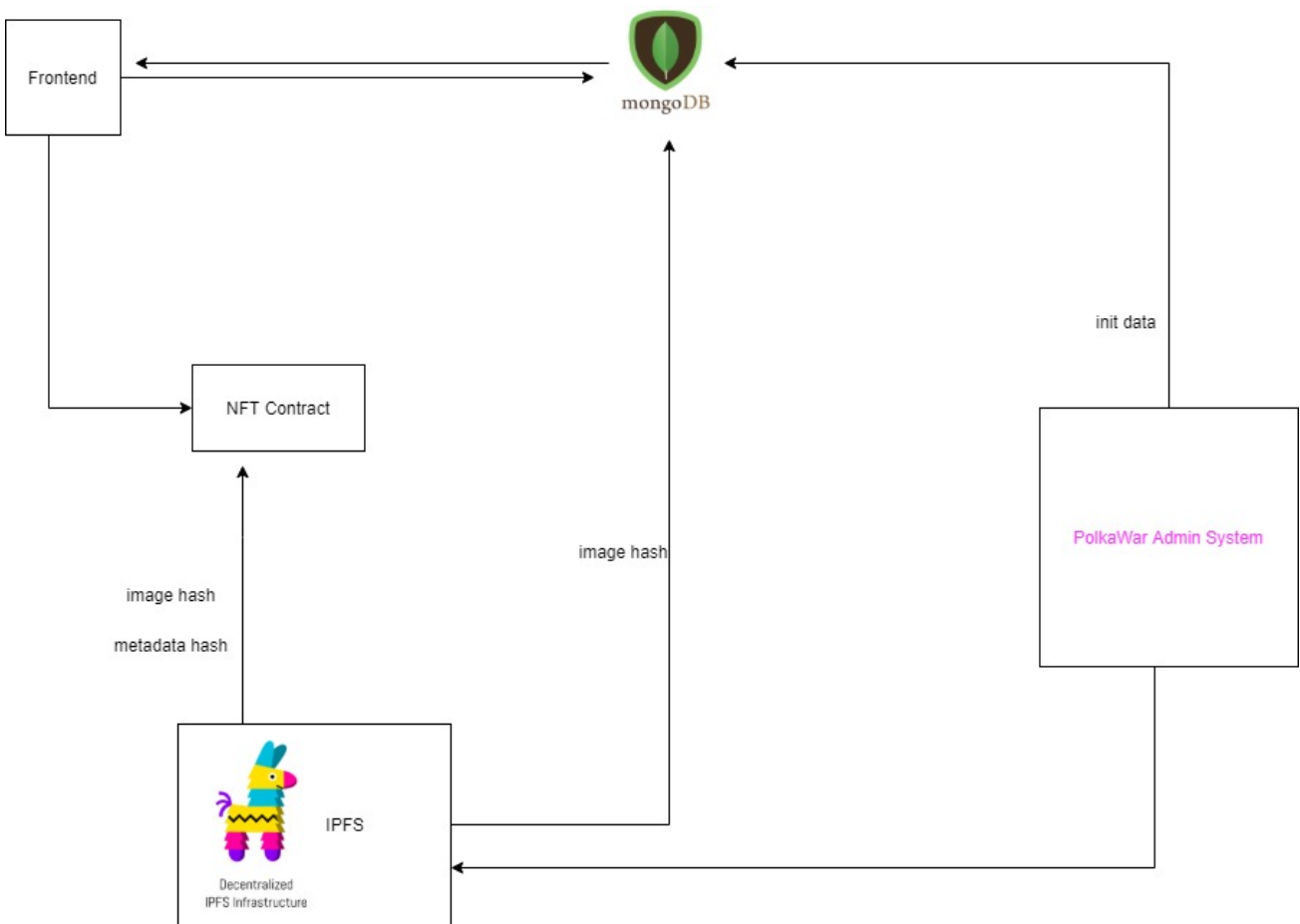
that sword at your home. You just need to send the request to the PolkaWar Logistics system, PolkaWar team will process and deliver it to you at the required address.



When the user sends a request to receive the physical item to the system and at the same time, puts an amount of PWAR tokens in the escrow, corresponding to the value of the item, the system sends a notification to the seller. Next, the seller checks the availability of the product. If the product is in stock, the order is confirmed and steps will be taken to dispatch the items to the buyer. When the user receives the product, he/she proceeds to confirm the delivery in the system. Through the automated smart contract, the system will release the amount held in escrow to the seller. The transaction concludes here. In cases of dispute, PolkaWar staff can intervene to resolve the issue.

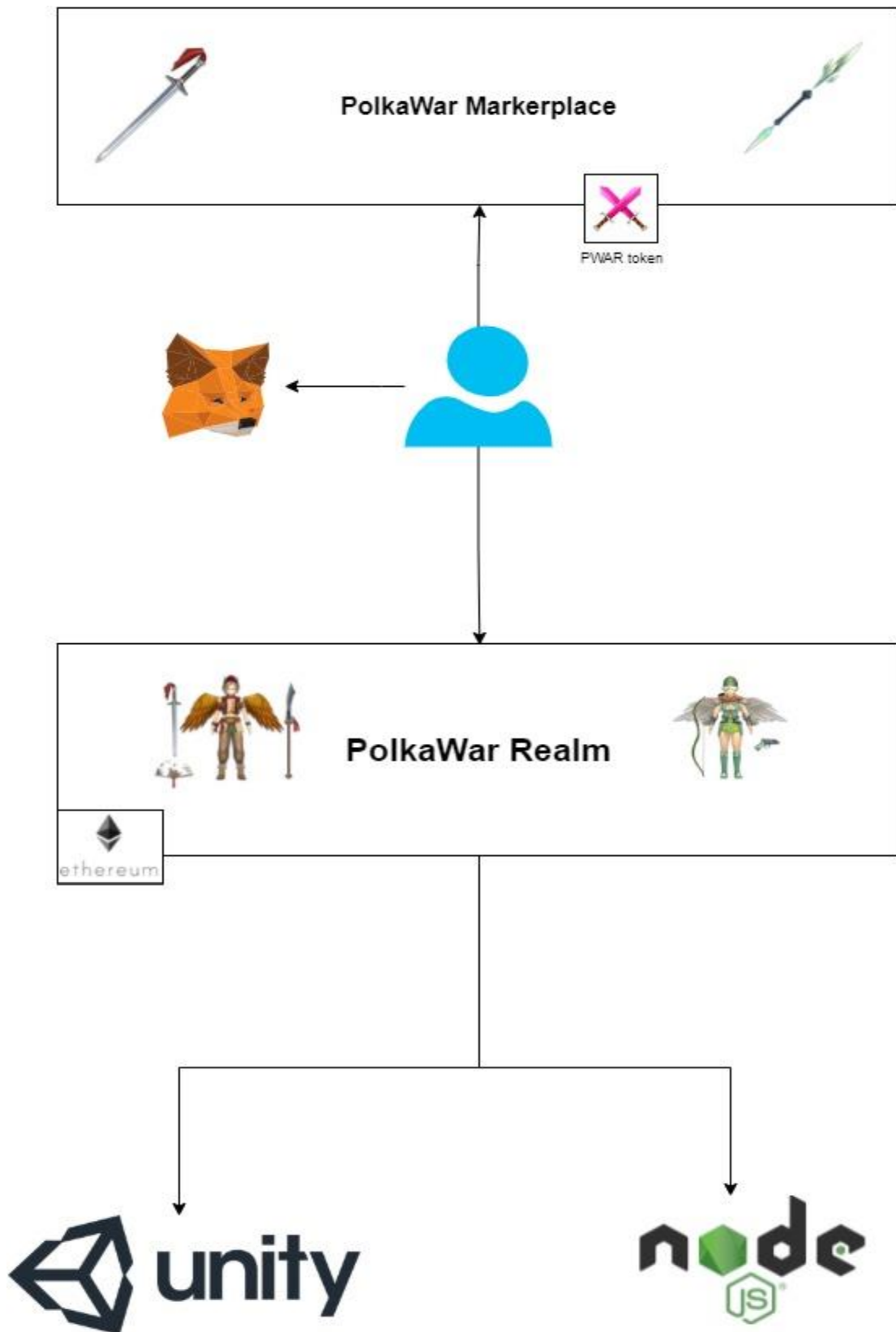
# POLKAWAR ARCHITECTURE

## Data Architecture



InterPlanetary File System (IPFS) is a distributed system for storing and accessing files, websites, applications, and data. All NFT item information is stored in IPFS, which ensures decentralization and does not require dependence on a centralized server.

## Game Architecture



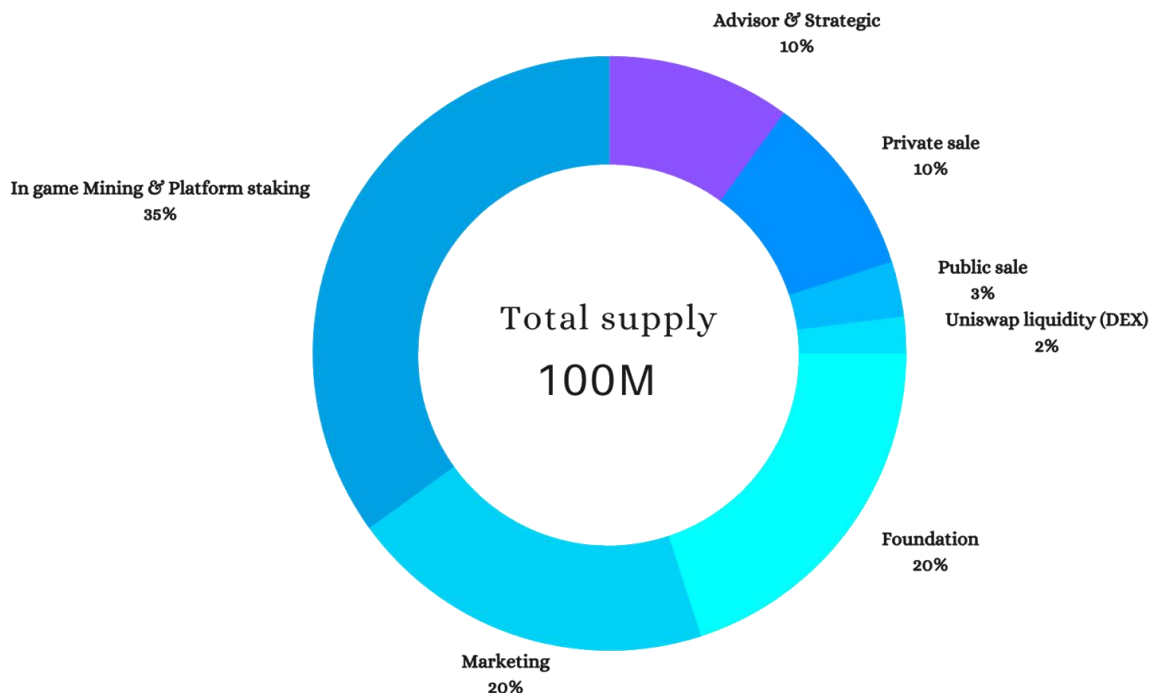
# PWAR TOKEN

## Token usecase

PWAR is the native token used in PolkaWar blockchain based NFT game realm. The tokens are used for following features:

1. **Farming reward:** Liquidity providers will be able to earn more profit by locking LP tokens.
2. **Staking reward:** Users can stake PWAR tokens to earn more tokens and *gems* to level up equipments.
3. **Marketplace fee:** They are used to pay for goods and services in the NFT marketplace. For instance: if you want to sell your NFT on PolkaWar marketplace, you must pay a small amount of PWAR tokens as fee and they will be burnt for ecosystem development.
4. **Renting fee:** An NFT renting platform is expected to be built for PolkaWar Realm users. This will allow users the ability to lease their own characters to others for battle and receive the fees in exchange, if they aren't playing the game actively themselves.
5. **Governance:** Token holders can participate in the decentralized governance process that decides on the use of revenues, game development and growth.
6. **Play to earn:** Users can earn PWAR tokens through participating in game battles
7. **Purchase Game Items:** PWAR can be used to purchase in-game weapons, equipments and exchange NFTs to physical items

## Tokenomics



Total PWAR supply will be 100,000,000 (100M). The token allocation details are as follows

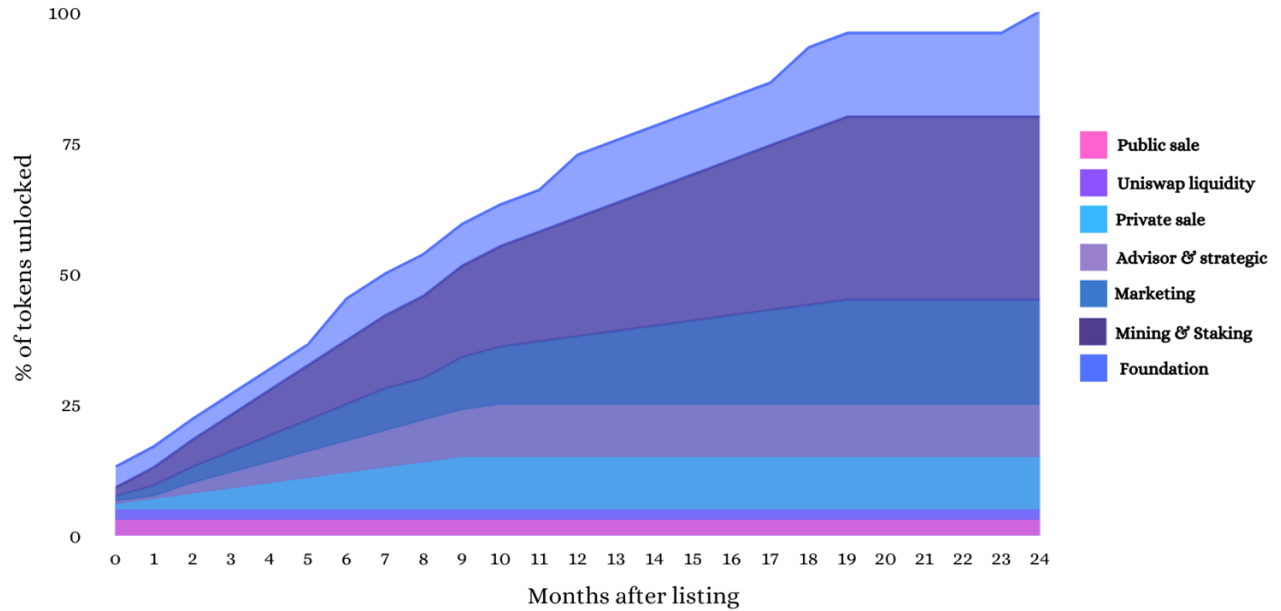
Allocation Type	Token Amount	Description
<b>Advisor &amp; Strategic</b>	10,000,000	Allocation for advisors and strategic partners of PolkaWar  TGE unlocks 5%, 15% Month 2, remaining monthly vesting at 10% for 8 months
<b>Private Sale</b>	10,000,000	Token will be used for private sale round. Private sale price: 0.08\$ TGE unlocks 10%, remaining monthly vesting at 10% for 9 months
<b>Public Sale</b>	3,000,000	IDO sale.  Price: 0.15\$
<b>Uniswap Liquidity</b>	2,000,000	Initial Uniswap Liquidity
<b>Foundation</b>	20,000,000	This fund will be shared between the founders of PolkaWar  TGE unlock 0%  Release 20% every 6 month
<b>Marketing</b>	20,000,000	This fund will be used to implement marketing campaigns, advertising and bounties, for the purpose of developing the community, products and ecosystem of PolkaWar  TGE unlock 0%  Monthly vesting at 5% for 20 months

**In-game Mining & Platform Staking**

35,000,000

TGE unlock 0%

Monthly vesting at 5% for 20 months



PWAR Token Release Schedule



# ROADMAP

## Q1, 2021:

- Research on DeFi & NFTs
- Team forming
- Design PWAR tokenomics

## Q2, 2021:

- Deployment of PWAR token smart contract
- Private sale
- White paper & website
- MVP
- NFT Airdrop campaign
- Public sale & listing on Uniswap
- Staking & Farming

## Q3, 2021:

- Character system
- Battle system
- PolkaWar marketplace testnet
- PolkaWar Realm testnet

## Q4, 2021:

- Equipment system
- PolkaWar marketplace mainnet
- PolkaWar Realm mainnet
- Launch Game on Casper Blockchain Testnet

## Q1 – Q2, 2022:

- NFT Renting
- PolkaWar Logistics
- Multichain Marketplace (Support Binance Smart Chain, PolkaDot, Casper)
- Launch Game on Casper Blockchain Mainnet

# PARTNERS & INVESTORS



PolkaBridge is a decentralized all-in-one financial application platform. The PolkaBridge ecosystem is expected to include cross-chain AMM, Farming, Lending, Fundraising platform (Launchpad), Prediction, NFT, and more. All products will be developed with PolkaDot as the base of activity.

One of PolkaBridge's most noticeable product is PolkaBridge DEX - a decentralized exchange that allows users to swap tokens on PolkaDot to other ones on other blockchain platforms without any dependence on any centralized platforms. In addition, with the smart farming mechanism, liquidity providers can earn more rewards without any inflation.

Website <https://polkabridge.org>



ChinaPolka is a self-organized non-profit China based community alliance, inspiring to build the largest PolkaDot ecological chain community in China, and popularize the new technology and new ecosystems to the Chinese people!

Website <https://chinapolka.com>

# DISCLAIMERS

The purpose of this white paper is to present the concept of the **PolkaWar** NFT based blockchain game and PWAR token. The information set forth herein may not be exhaustive and does not imply any elements of a contractual relationship. Its sole purpose is to provide relevant, reasonable information to potential investors and participants in order for them to determine whether to undertake a more thorough analysis of the offering and to come to an informed decision regarding any investment in the platform.

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Cryptocurrency exchange rates have exhibited strong volatility to date and the extent of exposure to potential loss could extend to the entire cryptocurrency investment. Many factors outside of the control of **PolkaWar** will affect the market price of cryptocurrencies, including, but not limited to, national and international economic, financial, regulatory, political, terrorist, military, and other events, adverse or positive news events and publicity, and generally extreme, uncertain, and volatile market conditions. Extreme changes in price and ability to sell/exchange may occur at any time.