# METAWORLD LAND

# White Paper

# Version 1.1

METAWORLD.LAND is a place where everyone can live - it's open, social, persistent and provides users with tools to interact, experience, improve and monetize their property. The virtual economy backbone is Solana blockchain; a backbone for content storage is decentralized IPFS.

**Welcome to METAWORLD.LAND, Metaverse for everyone.**

**The Best Beneficial Place to Collect, Buy and Sell NFT Marketplace**

# CONTENTS

## About METAWORLD.LAND

### 1) What is NFT?

Non-fungible tokens (NFTs) have received a great deal of media attention and are gaining popularity. NFTs are fledgling, unique, and blockchain - enabled cryptographic digital assets that represent objects such as artworks, music, collectibles, and in-game items. NFTs allow for new ways to consolidate, manage, code, transfer, and store digital materials. Despite the significant potential impact on present decentralized marketplaces and future commercial opportunities, research on NFTs is relatively limited. This paper seeks to contribute to the scholarly literature on NFTs by establishing a conceptual understanding of NFTs, their applications in various industries, and their primary adoption challenges. The paper also reviews the primary technological components of NFTs and explains how blockchain and smart contract technologies contribute to the NFT's uniqueness. Fruitful future research directions are also discussed in this paper to advance NFTs scholarly literature.

## 2) ABOUT METAWORLD.LAND

The metaverse's development has rapidly created interesting new blockchain use cases. As 2020 was such a massive year for the metaverse and Non-Fungible Tokens (NFTs), it's no wonder that virtual land has become a hot topic.

Some NFT sales of land have reached prices greater than properties in the physical world, making the concept difficult to grasp for some. In fact, there are actually a lot of similarities between MetaWorld and typical real estate. But as a digital asset on the blockchain, MetaWorld has some unique features to explore.

## 3) What is NFT Virtual land?

As mentioned, metaverse projects are digital worlds that users can usually explore with 3D avatars. Second Live, for example, provides areas and venues for concerts, conferences, and expositions. While projects like Second Live don't let users

**COMMON LAND PLOT**    **RARE LAND PLOT**    **MYTHIC LAND PLOT**

purchase a permanent virtual reality space, other metaverse worlds do. Developers create large maps of land divided into small parcels to sell on the market.

To represent the unique ownership of the area, users purchase NFTs linked to a particular plot of land. You can purchase these plots through a land sale directly from the project or on the secondary market. Exactly what you can do with MetaWorld depends on each project.

## 4) What are the use cases of metaverse land?

Apart from speculation, landowners can use their virtual space in various use cases:

**A. Advertising** - If your plot is in a popular area or district and attracts many visitors, you can charge for advertising space.

**B. Socializing** - You can host events on your digital land, including concerts, conferences, and community meetups.

**C. Gaming** - Your MetaWorld might have a use in an NFT video game. For example, land in Axie Infinity can provide extra resources, tokens, crafting ingredients.
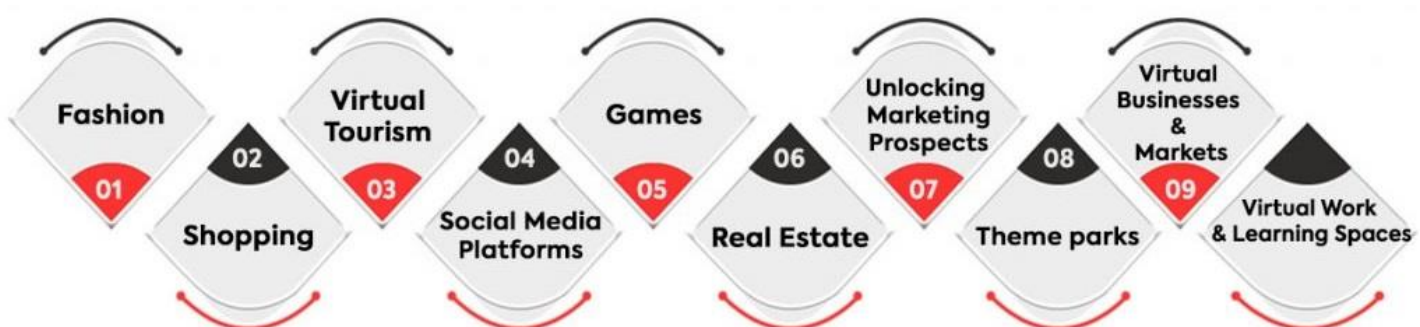
**D. Work** - Land that can be explored with a 3D avatar can be used as a virtual office space or to provide digital services. PwC Hong Kong will use The Sandbox land in their Web 3.0 advisory services.

## 5) Closing thoughts -

To many, the idea of virtual land sales might seem far-fetched. However, you only need to look at the rise of NFTs, digital collectibles, and the metaverse to understand how MetaWorld has developed.

**Metaverse Market in Billions**

| Year | Value |
|------|-------|
| 2020 | $47 |
| 2028 | $848 |

18x
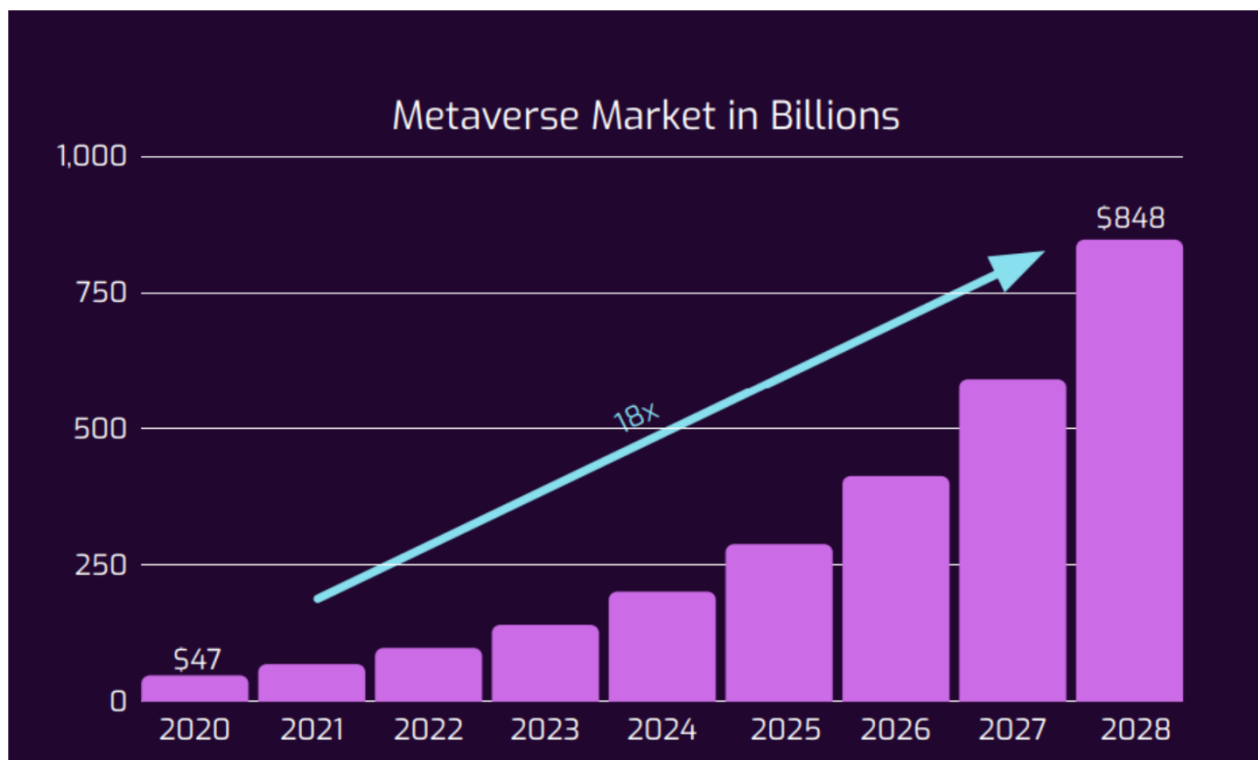
The idea isn't much different from owning a website or other virtual space. For example, popular domain names have sold

01 Fashion
02 Shopping
03 Virtual Tourism
04 Social Media Platforms
05 Games
06 Real Estate
07 Unlocking Marketing Prospects
08 Theme parks
09 Virtual Businesses & Markets
Virtual Work & Learning Spaces

for hundreds of thousands of dollars. However, the way MetaWorlds guarantee ownership is where we see a difference. With the tech world preparing itself for a metaverse future, we shouldn't be surprised to see even more metaverse MetaWorld for sale soon.

## 6) Definition of a project -

The following fields describe projects that are open for a token presale: Indicates values that can be updated even after the project went live. Indicates fields that are mandatory when the project is created. This project is launch worldwide as per our ROAD MAP step by step showing below.

## FIRST FASE

The company will launch its token in the first phase through METAWORLD.LAND. Whose logo will be METAWORLD This BEP20 is a token developed.

# TOKEN DİSTRİBUTİON

## For More Visit:

https://bscscan.com/address/0xf9b1b7d0d1988f33841da258f73614c3d6decd6e

**Note:** METAWORLD.LAND and HIO Coin holders are allowed to stake and un-stake at any time, but their staking rewards are locked for 6 months. Staking rewards are distributed algorithmically each week based on the total supply of the staking wallet. More details about specific tokenomics including the lockup will be released closer to the launch date of the token, which is tentatively scheduled for some time in 2023.

## HIO COIN CONOMICS

Private Sale
10%

Public Sale
25%

Staking Rewards
35%

Marketing &
Promotion
15%

Team & Advisors
15%

- Private Sale
- Public Sale
- Staking Rewards
- Marketing & Promotion
- Team & Advisors

## METAWORLD.LAND Assets

NFTs

Meta-Mall

Virtual Land

Metaworld.land

## Meta-Mall

We plan to use the proceeds from our **METAWORLD.LAND** collection to create a commercial real estate portfolio of MetaMalls. MetaMalls will be franchises for creators to bring their spaces into the metaverse. **METAWORLD.LAND** will collect a percentage of revenue generated at each MetaMall location and this will be used to continue to fund METAWORLD.LAND operations. Portfolio Management Theory As highlighted in our introduction, a large reason that we believe that the metaverse is underdeveloped involve the underlying pricing models and artificial scarcity. By creating spaces where multiple users can create businesses on a single piece of land, we believe that we can alleviate the current metaverse housing shortage. However, we run the risk of poorly selecting which pieces of land we build our MetaMalls are on. To solve this, we use state of the art machine learning algorithms to assemble a dynamic real estate portfolio.

## Generative 3D Art Using Artificial Intelligence

Recent advancements in machine learning has allowed computers to teach themselves how to make houses, removing the need for an expensive metaverse architect. Paschalidou et al. (2021) designed a neural network model called Autoregressive Transformers for Indoor Scene Synthesis (ATISS) which uses this architecture to learn interior design from existing rooms:
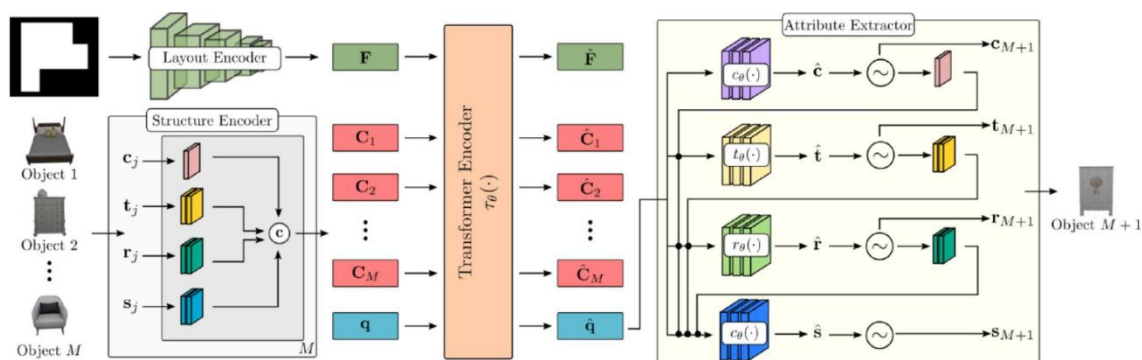


Data scientists can further optimize this process using distributed systems to generate thousands of metaverse architecture pieces in a matter of seconds. This has the potential to significantly reduce the cost of creating a new metaverse or Play2Earn (P2E) game. This could be also used to create open-world environments where the land is generated as the user walks towards the horizon. Users may value owning their own home in these types of worlds as a collectible item.

For this visualization, the user can pick the time frame that they want to see results over. The pipeline that calculates these results will then aggregate these values and then apply the following formula to each coordinate:

$$\frac{\sum_{(v,e)\in G} \frac{ev}{e_{min}}}{\sum_{(v,e)\in G} \frac{e}{e_{min}}}$$

Where e refers to the length of edges between two nodes in a graph. In this case, we can use Euclidean distance, i.e.,

$$e = \sqrt{(x_i - x_j)^2 + (y_i - y_j)^2}$$

## Machine Learning

Time series forecasting is often neglected but still has value because while predicting the exact price in the future is impossible, it is possible to define a realistic price range and use this to help investors identify opportunities and, more importantly, manage their risk exposure. A price range for the future of a cryptocurrency with 100% accuracy would be somewhere between 0 and infinity. This is not very useful information. However, the majority of the noise in a distribution occurs along the outliers. By removing just 10% of noise from each side, the gap can be reduced from infinity to a few hundred dollars in the short term. This is achieved by training a neural network model using quantile loss:

Quantiles are interchangeably called percentiles. p10 for example, represents the point that is more than 10% of outcomes. The status quo is to use p10, p50, and p90:

$$p_\tau(y, q_\tau) = \begin{cases} \tau \cdot |y - q_\tau| & y \geq q_\tau \\ (1 - \tau) \cdot |y - q_\tau| & y \leq q_\tau \end{cases}$$

The distance between p10 and p90 indicates the model's confidence in its median p50 value; over time, this gap grows as the model becomes more uncertain. Uncertainty is natural as predicting the future is impossible, but the direction of these graphs is useful and these forecasts can also indicate when a
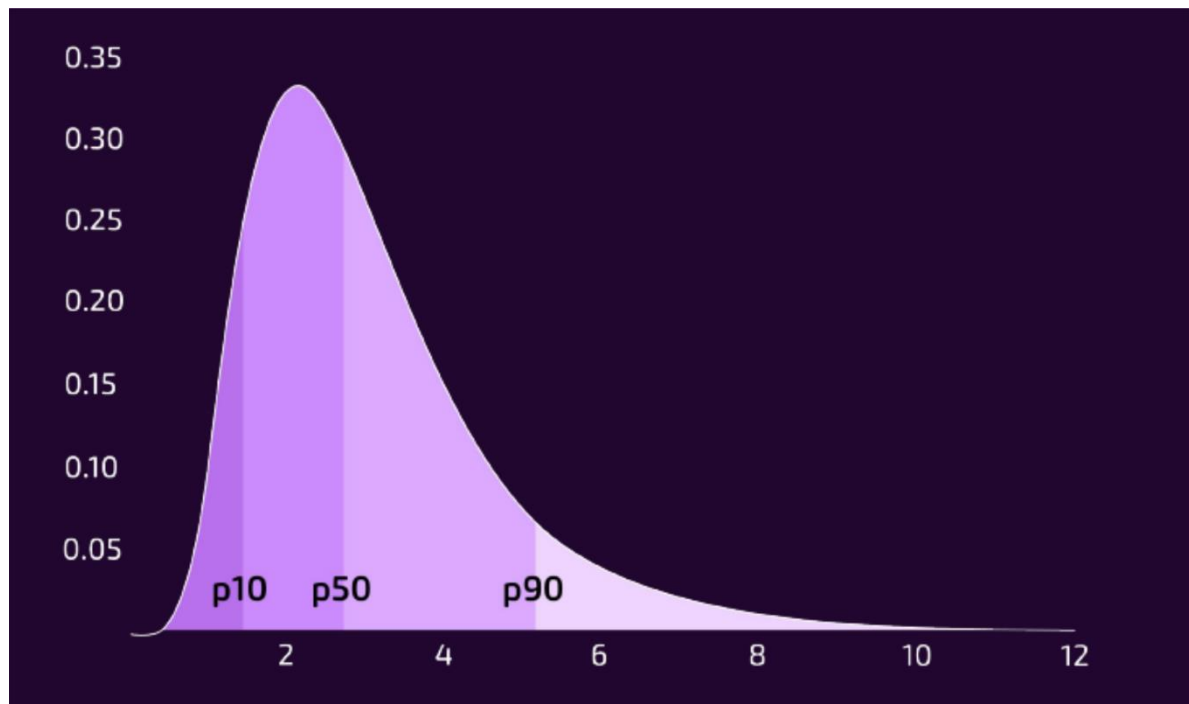


market is overheated. This is an example of quantile regression on the price history of Bitcoin: Quantiles are interchangeably called percentiles. p10 for example, represents the point that is more than 10% of outcomes. The status quo is to use p10, p50, and p90:
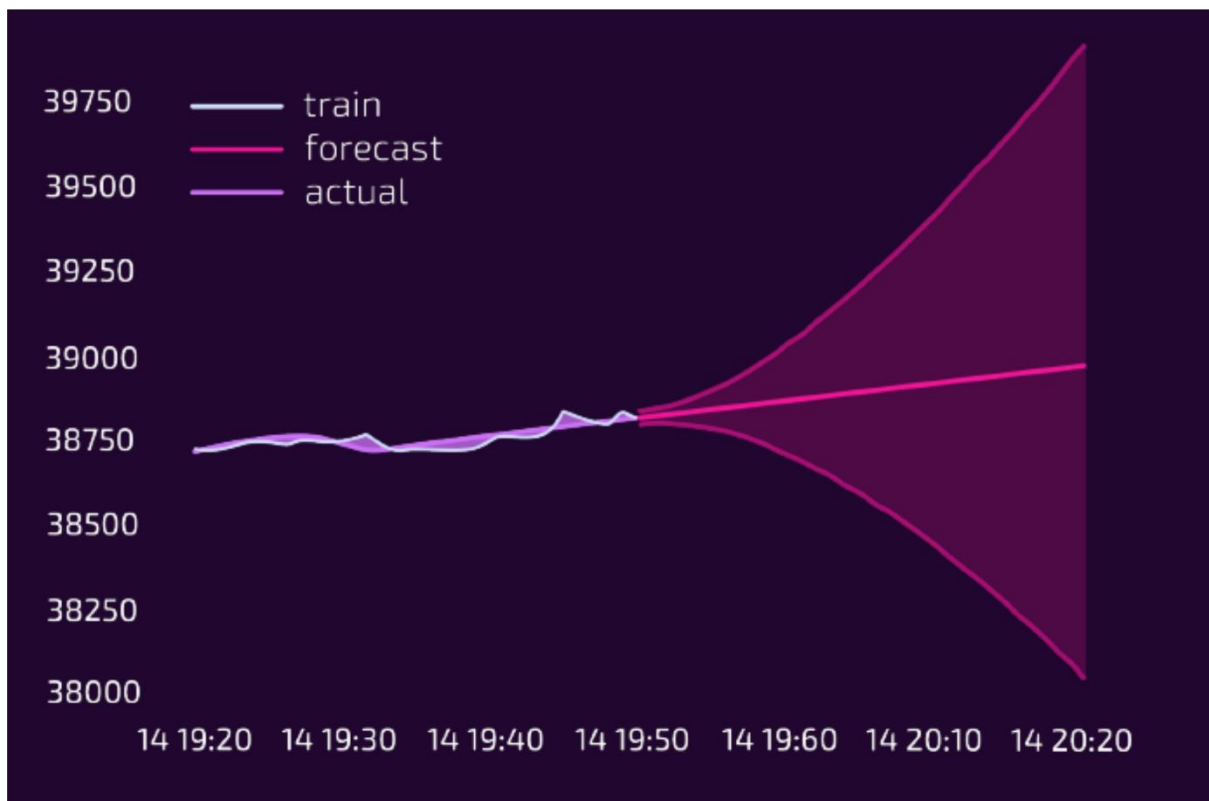
Bitcoin rose during the 30 seconds after this forecast to $38,876.33, matching the bullish directional the model forecasts. Predicting price ranges on anything longer than a short-term horizon for a volatile asset such as stocks or Bitcoin is challenging because of the high velocity at which assets are exchanged. As mentioned previously, NFTs are lower velocity assets with infrequent sales history. This makes predicting NFT sales price more similar to demand forecasting for a warehouse than stock picking. Demand forecasting is a problem that has been studied extensively by supply chain researchers. Recent developments in the field of forecasting apply neural networks to improve upon traditional forecasting models such as ARIMA and ETS.

The ARIMA formula is defined as:

$$y_t^* = \Delta^d y_t$$

$$y_t^* = \mu + \underbrace{\sum_{i=1}^{p} \phi_i y_{t-i}^*}_{AR} + \underbrace{\sum_{i=1}^{q} \theta_i \epsilon_{t-i}}_{MA} + \epsilon_t$$

This formula has three main components:

● **Autoregression (AR):** the model uses the relationship between the current observation and some number of past operations

● **Integrated (I):** Stationary time series are desirable in forecasting because they do not depend on when the time series is observed. This protects against significant slippage in the brief moment it takes a user to authorize a transaction from their wallet

● **Moving Average (MA):** this assumes that there is residual error that is applied to lagged operations

One issue with ARIMA is choosing the parameters. This is sometimes done arbitrarily but a better technique that involves machine learning can be used to learn the parameters by minimizing a loss function. However, the larger issue with ARIMA is that the formula applies the same terms throughout the time series, meaning that it fails to account for seasonal

activity. Holidays and seasons have a nontrivial impact on market conditions.

More advanced algorithms are also capable of learning patterns related to seasonality. Facebook Prophet uses an additive model that fits non-linear trends on daily, weekly, and yearly granularities before aggregating the results along with seasonality data using the formula:

$$y(t) = g(t) + s(t) + h(t) + \epsilon(t)$$

$$g(t) = \frac{C(t)}{1 + e^{-(k + \mathbf{a}(t)^T \delta)(m + \mathbf{a}(t)^T \gamma)}}$$

$$s(t) = \sum_{n-1}^{N} (a_n \cos(\frac{2\pi n t}{P} + b_n \sin(\frac{2\pi n t}{P})))$$

However, Prophet fails to consider causal relationships between the past and the future. Prophet also adjusts only to holidays that are known in advance, failing to recognize current events that cause sudden shocks to the pricing ecosystem. This results in simplistic assumptions that fail to hold with highly volatile asset classes.

In cases where logistic models fail to capture the complexity of a forecasting task, neural networks are often used. These use a series of logistical units to capture more complex relationships. Pengetal. (2021) attempted to use supervised feature selection algorithms on 124 technical analysis indicators in an attempt to algorithmically select features with which to train an Artificial

Neural Network (ANN).` Their results found that regardless of neural network architecture, both shallow and deep neural networks could reasonably predict stock prices with 50-65% accuracy. Ensemble methods that combine a variety of neural network architectures to introduce attention and memory prove to be effective, albeit given small sample sizes. Wu et al. (2021) proposed an algorithm that feeds the results of a CNN into a type of Recurrent Neural Network (RNN) called Long Short-Term Memory (LSTM).

## Go-to-Market Strategy

- **Content Strategy**

Create tailored content strategies for Instagram, LinkedIn, Pinterest, and Twitter
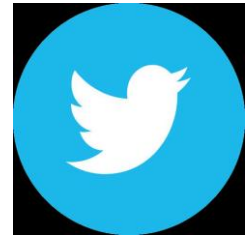
- **Social Media Retargeting**

Capture web traffic and run lookalike audiences to find our niche

- **NFT Marketing**

Our Marketplace portfolio creates awareness about our product offerings

- **Crypto Marketing**

Run ads on high-conversion sites like Etherscan and BscScan

- **LinkedIn**

Advertising Onboard businesses for custom analytics dashboards or consulting

## Governance

While users are embedded in METAWORLD.LAND, there is a need to govern METAWORLD.LAND properly. METAWORLD.LAND must adopt new technologies and evolve in a way most suitable for most of its users – something most users don't want to care about.

- **Partners**



We do not aim to reinvent the wheel. We focus on building a virtual reality platform that will enable users to experience and monetize their property. To create the most efficient environment, we plan to integrate reputable partners from segments such as gaming, decentralized payment solutions, De-Fi lending platforms and others. These partners will push METAWORLD.LAND to a higher level. NFT collections will be accepted to get included on the platform. This will enable full integration of the collections' brand into METAWORLD.LAND. NFT owners will be able to use their NFTs as avatars or to improve their assets and other perks.

All partners will be required to purchase and stake HIO COIN to start the onboarding process - more in the "HIO COIN" section.

- **DAO**

Small centralized systems move quickly forward, but as they grow, they become ineffective. The latest development in blockchain shows us how strong a concept of decentralization is, how many things can be achieved if people are given enough freedom and just the right incentive. METAWORLD.LAND starts as a project

centralized around its creators trying to set METAWORLD.LAND in the right direction. When this direction is set and other people are onboarded, METAWORLD.LAND will start its transformation to DAO.

Ownership and contributions to METAWORLD.LAND will be used to define a voting power in DAO - the more you own, the more you've built in METAWORLD.LAND, and the more you've contributed to

METAWORLD.LAND, the more considerable voting power you'll have in the DAO. DAO will decide about incentives and will define the future of METAWORLD.LAND.

## Conclusion

The metaverse can confusing for first time users, but it doesn't have to be. Home is where the heart is, but there is a surprising shortage of homes in the metaverse. Creating these fundamental structures are a key way to reach every potential user as they join the metaverse. While there has been a gold rush on land, it seems that housing development has largely been neglected. Sure, most metaverses have some type of builder tool, but people can build their homes from scratch in the real world. Even so, architects and real estate developers are in high demand. It stands to reason that the metaverse will operate along similar mechanics.

METAWORLD.LAND is interested not just in real estate investment. creating these homes, but also improving the virtual housing market and the metaverse economy through

the use of advanced data analytics. These analytics can form the basis of more accurate NFT appraisals, which will enhance the credibility of NFT lenders and investment firms. New developments in artificial intelligence make it possible to finally understand what the intrinsic value of a NFT is and how price is influenced by similar NFTs. Users can use this information to assess risk across their virtual asset and land portfolios. Artificial intelligence has applications towards every aspect of the metaverse - from content creation to understanding how the metaverse economy is developing. Recent developments in the scientific community such as CNN models like ATISS and MQ-Transformer are transforming computer vision and forecasting to create a more intelligent metaverse.

HIO COIN holders have the opportunity to participate in the creation of this new metaverse, one that is data-driven and behaves rationally. The metaverse is supposed to be an improvement over real life but is plagued by economic inefficiencies caused by a lack of supply and price fixing. Land inequality is a huge problem in the real world and
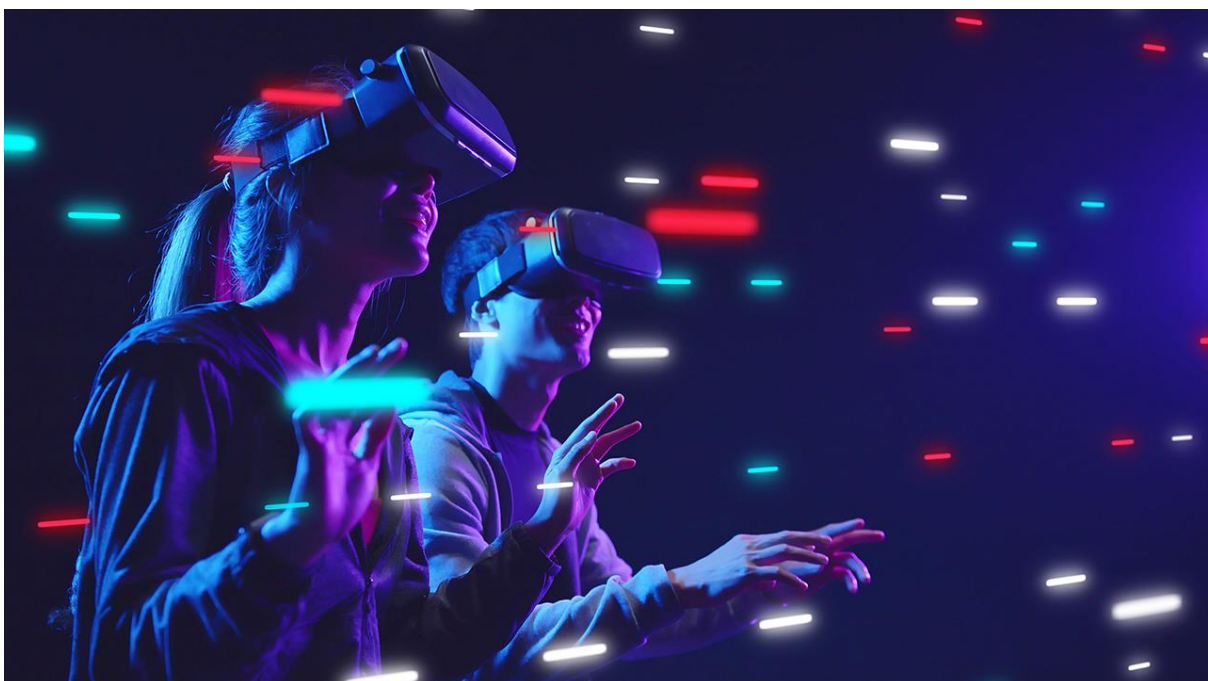
METAWORLD.LAND has the opportunity to reverse that trend in the metaverse.

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THANK YOU