

# REALM

White paper

# Contents

[Disclaimer](#)

[Introduction](#)

[Tokenising Attention](#)

[A New Way to Showcase NFTs](#)

[Realms as NFTs](#)

[The \\$REALM Token](#)

[Introducing NFTix](#)

[Collaboration & Creator Rights](#)

[The Realm Foundation](#)

[IRL and Digital Sustainability](#)

[Living NFTs](#)

[In-Game Items](#)

## Disclaimer

The information in our white paper is subject to change or can be updated without notice and should not be construed as a commitment, promise or guarantee by Realm or any other individual or organisation mentioned in this white paper relating to the future availability of services related to the use of the tokens or to their future performance or value.

We've done our best to provide an accurate representation of Realm. However, there may be forward-looking statements included in this document that do not materialize as stated due to changes in creative direction, factors beyond our control, or shifts in the marketplace.

# Introduction

Realm is a cross chain, community driven open-source project that encourages collectors and creators to express their artistic vision in the purest form: their own magical virtual realm.

With Realm, you can create unique and customisable virtual ecosystems filled with games, NFTs, genetically encoded NFT pets, travel between realms via augmented reality (AR), mint collectible NFTix to host exclusive exhibitions, and use live audio streaming to connect with friends and fans.

Our platform aims to achieve unparalleled levels of player experience and creative freedom. We want to be the premier blockchain metaverse ecosystem. Powered by Godot open source game engine, realm players have complete control over the space they create, and \$REALM, a cross-chain token, is used as the primary utility token within the Realm universe.

Our goal is to create a metaverse for people to construct an infinite number of microverses fully customisable to their tastes and visions. We've partnered with some of the best chains and NFTs brands currently shaping and shifting the cryptosphere to make this goal possible.



# Tokenising Attention

A revolution in engagement advertising

The online advertising industry is changing rapidly. Seismic shifts are sending shockwaves through the industry - from Google discontinuing support for cookies to the introduction of 'ask to track' on iOS and soon Android - marketers are finding it harder and harder to reach their audiences. The days of users forgoing their rights to privacy are seemingly coming to an end.

There is, however, a new paradigm emerging - one that gives users control over their data and provides a fair trade-off for their engagement. Pioneered by businesses such as Brave, this model allows users to choose to opt-in to being tracked in return for a fair share of the proceeds from advertising.

The advertising model employed by Realm takes this concept further - not only are users rewarded for consuming advertising on the platform, but creators are able to deploy inventory in their worlds and in turn earn from the display of such adverts. Both players and builders can make financial returns from providing the advertising industry with well-targeted, high conversion ad inventory.

The \$REALM token plays a pivotal role in the distribution of such rewards to users, and therefore functions with core utility within the platform.

# A New Way to Showcase NFTs

## *Art deserves more than a list*

Right now, we feel, most NFT marketplaces resemble a basic version of listing sites like eBay. Being disappointed with this design, and truly believing the design does not honour NFT artists and their work, we created Realm.

We want NFTs to be shared and presented in unique and creative ways, like an auction on the moon, an underwater art gallery, or a space that simply contains interactive sound. With Realm, NFT artists have the opportunity to showcase their masterpieces in customisable VR/AR experiences, and viewers will have the chance to see the true vision and genius of the creator in their ecosystem.

All assets within the realm ecosystem exist as some form of non-fungible token. They can exist on a multitude of chains and be minted by players on either Layer 2 Polygon and Ethereum.

Initially, Realm will leverage integration with OpenSea, both via API connections and on the OpenSea marketplace. By leveraging the secure, stable marketplace, and vast amount of NFT content on OpenSea, Realm can rapidly scale its interactions with the wider NFT ecosystem. On top of this, OpenSea's support of Matic (Polygon) allows for frictionless trading of non-fungible items such as NFTix and in-game assets.

# The Metaverse

## *Personalising the Metaverse*

We believe the majority of metaverses are governed by a narrow set of limitations, be they spatial, physical or financial. All too often these limitations are a mirror of the centralisation of power and resources faced in the real world of traditional finance and dynastic politics.

Why should structural limitations be imposed on a metaverse at all?

The freedom to create and monetise in whatever way you see fit is an integral part of the ethos of Realm. Our platform removes the restrictions and centralisation placed on land ownership and property in the physical world by offering limitless environmental options that are decentralised.

For example, each Realm player will have the ability to create as many realms as they like using the Realm suite of builder tools. These tools have a limitless possibility, allowing for complete freedom of expression.

Some of the ways you can use metaverses in Realm include meeting new creators and collectors, hosting exhibitions, commerce activities, and creative endeavours. All realms allow social interaction, and NFTs from other services can be easily integrated into the interactive AR/VR platform.

## Realms as NFTs

### *Customise and Monetise*

It was this idea of a completely personalised microverse that brought Realm to life.

A realm is a virtual space powered by the Godot open source game engine, giving a creator complete control over their realm. A realm can be minted as an ERC-1155 with an address on the Ethereum blockchain. They can be traded, and hold other ERC-721's such as sculptures and objects.

As an ERC-1155, a realm can hold ERC-20 tokens such as \$REALM tokens. Realms are accessible via a hashed reference on the blockchain, with a unique identifier indelibly linked to the digital space. A copy of the realm is stored on the Interplanetary File System (IPFS) to ensure immutability.

## The \$REALM Token

### *Unlocking the Realms*

We've made key design choices to increase the value of \$REALM tokens over time by decreasing the circulating supply. As creators build larger and more complex microverses the owners will be required to stake \$REALM tokens to support its maintenance and utilise additional features such as a hyper portal, which increases their realm's visibility.

The \$REALM token is a cross-chain token that functions as the primary utility token within the Realm metaverse.

- Cross-Chain: \$REALM is initially an ERC-20 token that will also be available on Polygon Layer 2 and BSC chains, which provide low-cost transactions for players. Players can use simple bridges to move their tokens between different chains.

- Purchases in realms: Players spend \$REALM to purchase NFTix and access other realms, or purchase in-game consumables and cosmetic items.
- Rewards: \$REALM will be rewarded to players for interacting with the ecosystem including creating realms, exploring other realms and loot box rewards.
- Staking: \$REALM staking provides players with an increased share of attention earnings - by staking the token and earning in-game XP players are given a larger share of revenues. and in-game advantages. Rewards include limited edition Layer 2 NFTs and access to exclusive realms and content.
- Governance: Holding \$REALM tokens will allow players to exercise key voting rights on major decisions about the future direction and development of the Realm ecosystem.
- Fees: 5% of all transactions carried out in \$REALM tokens will be equally divided between the Realm foundation and Realm development and operations.

## Introducing NFTix

### *The Ticket of the Future*

NFTix are unique collectible NFTs that provide access to a realm. Realm creators can grant NFTix holders any type of access privilege to their realm including one-offs, time limited events, and annual or perpetual memberships that will be paid for in \$REALM.

This provides utility to all manner of creators, from art galleries with multiple exhibitions to time-sensitive private viewing events where an artist connects via live audio with their fans.

NFTix themselves can be valuable works of art that are verifiably unique and provided by the realm event creator. For instance, a realm gallery could host an exhibition of foundational crypto art, commission a design for the NFTix then mint only 100 copies for an exclusive audience.

Right now, the market projection for ticket stubs and other memorabilia is set to grow considerably. Considering this, and the positive explosion of the playing card and NFT mania, we believe NFTix is the next natural addition to the evolving NFT world. We intend to further blur the lines by embedding access to a physical space within the digital NFTix.

# Collaboration & Creator Rights

## *Sharing Realms*

Realm offers collaborative creator rights. Creators can work together to build different elements for a realm including 3D environments, music, art, and game codes.

Creators can then use their realm to host events or rent it for short-term ones such as festivals, exhibitions, parties, meetings and conferences. All proceeds gained from the realm are automatically paid to the creators based upon their predefined split.

Having the option to rent an existing realm allows busy creators the advantage of borrowing a space already containing everything they need to showcase their work, host a performance, or a conference with stages, retail, and more.

# The Realm Foundation

## *Funding the NFT arts*

25% of the entire supply of \$REALM will be distributed among the community over the next five years. Combined with the dispersal of platform fees, the Realm Foundation has the financial power to provide real benefit to the NFT gaming and art community.

Realm is committed to open source, and will be offering grants to content creators to build art, games and experiences using the Realm engine. Community DAO functions will allow holders to determine the direction of creator grants and other community funded initiatives. The first grants provided by the Foundation will be part of a creator competition awarding the best entrants with significant \$REALM grants and stimulating the creative community.



# IRL and Digital Sustainability

## *Caring in IRL*

As we continue to build Realm and grow our community, we will also grow our sustainability initiatives. CO2 emittance through energy usage is of deep concern to us from both an environmental and efficiency perspective. Our solution allows people to play and explore in realms, while effortlessly improving the real world. We have a number of initiatives and partnerships that will empower our players to do good, while having fun.

### Low Impact Processing

You shouldn't just remove CO2 from the air, you should start by reducing your emittance. We decided the best way we can do this is to have highly optimised code, a lean lightweight game engine, and most importantly, Layer 2 processing. We have partnered with both Reef Chain and Polygon to do the majority of our processing on their chains that are many orders of magnitude more efficient than Ethereum layer 1.

### A Tree in Realm, a Tree IRL

Even with the huge savings from Layer 2, we still have some carbon output we'd like to reduce. That's why we've partnered with Eden Reforestation to plant trees in the real world when trees are planted in Realm. When you plant a realm tree we send funds to Eden reforestation, who pay the local community to plant mangrove trees. Mangrove trees are planted where land meets water so they reduce erosion, ensure a thriving aquatic habitat and remove 12.5kg of CO2 per year. Why plant trees in Realm? To feed the pets of course.



# Living NFTs

## *No Realm is complete without Life*

Realm Pets represent the most advanced expression of on-chain genetics to date. Beginning with an ultra rare Genesis series designed by a number of top tier character designers. Genesis pets are accompanied by other classes of pets with Genesis being the rarest:

- Genesis
- Mythic
- Legendary
- Rare
- Uncommon
- Common

To get players started, everyone will receive their own unique pet companion upon entering the realms. These fully animated 3D companions will guide you through the Realms and grow as you explore, their tastes and smell helps you discover loot and other rare pets.

- Half of the Genesis pets will be found in randomised loot boxes throughout the realms.
- The remaining half will be available for purchase via an auction on OpenSea.

Players can breed pets but the outcome is far from known. Verifiable randomness from ChainLink generates seeds and parameters of Realm pets, who are hosted on the blockchain. This random input feeds into all of our genetic mutation algorithms, which results in a verifiably unique pet that's created from the genomes of its parents and its own random mutations.

The other five tiers can be acquired through random loot discovery or trading. Everyone can level their pets through feeding, exploration, and other in-game actions.

The generator metadata for pets, and the rendering code required to make them interactive, will at some point be shared so community members can show off their pets on their website and social channels. However, the original series of Realm pets will retain their verifiable rarity.

## In-Game Items

### *Consumables and Cosmetics*

Realm also includes several other means of storing and trading value:

Consumables like trees and fruit are created as non-fungible items on Polygon Layer 2. Items can be purchased with \$REALM on any chain. Cosmetic items such as pets, avatars, or realm accessories can be traded freely or used and burned.

By exploring realms, and interacting with various experiences created by the Realm team and community creators, rewards will be earned in the form of NFT items and currency.

## Cross Chain, Cross Platform Approach

### *Mobile first and seamless UX*

Realm is a cross chain metaverse, founded on the Ethereum ecosystem where most of the valuable NFTs exist. We use Matic to optimise our Ethereum activity. U87Y

Another fundamental principle that the team set out to demonstrate was cross platform interoperability and providing a seamless UX experience on every platform.

We've decided to address these concerns by first focusing on the mobile experience. We believe AR is at its best on tablet and mobile devices, and we want Realm players to enjoy their realm exploration. We will also produce web versions, enabling desktop players to freely travel and explore the platform, and embeddable frames for third-party site use.

This approach will allow creators, galleries, and brands the opportunity to showcase their realms in their own ecosystem, and entrench Realm as the central platform for blockchain based spaces and interaction.

VR support will be featured heavily in the future roadmap as we expect it to be a desired feature for power players and early blockchain gamers. The Realm engine will easily provide this capability, and VR support via OpenVR will allow Oculus and Vive players to interact via the browser.

We are thrilled by the prospect of building a suite of VR creator tools that have tactile 3D objects, space manipulation, and 3D painting. The future of digital creation is an exciting place.

# The Realm Architecture

## *Technical Foundations*

The Realm engine provides the following features to creators:

- A 3D engine to render 3D content and build experiences
- A scripting system that developers can code in GDScript or C++
- A player-to-player (P2P) multiplayer library giving developers access to P2P connections. For example coordinates, postures, voice chat and messaging
- Zero code blockchain, no knowledge of smart contracts required
- Import 3D models with automatic conversion pipelines for 2D and 3D assets
- Easy tools (phone, VR, web, desktop) for creating and customizing existing 3D spaces like shops, galleries or even procedurally generated planets
- Realm views can be easily integrated into websites, art installations or even video games
- Your creations are yours. You own all the rights to the assets you make and publish. All code required for rendering and viewing will be provided as open source libraries
- License terms are automatically observed and enforced by platform (e.g. CC BY-SA 3.0 license). Attribution is automatically added to derived / parent NFTs and commercial usage can be allowed or disallowed for free / libre NFTs
- Automatic, trustless revenue sharing with other creators

# Conclusion

Realm's decentralized platform allows players and creators to own a piece of our gaming metaverse (a realm), participate in the governance and economy (\$REALM), and express their artistic visions in customisable creative environments.

By providing a unique engagement based reward system that leverages the blockchain to tokenise attention and distribute advertising revenues, REALM is creating a sustainable economy for all participants - be they players or creators.

Over the next year, we will continue to build new creative avenues and offerings for players and creators to play, create, collaborate, collect and earn, and govern.

Our commitment to open-source will stay true, and as Realm grows, access to code and designs will be shared among the community. We want all players and creators to feel they have a part in building the first truly cross chain metaverse that is Realm.

Ready to explore?