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# The State Of The Metaverse

*"The metaverse is the bridge to the unseen world. It allows people to directly communicate and visualize things that were previously very difficult, such as their imagination. There will be many individual metaverses as well as platforms for building metaverses like the meta metaverse which will also require languages for describing metaverse specific transformations. Other specialized metaverse browsers will be needed to show the way forward. The world will never look the same."*

-[Joel Dietz](#) ([CryptoApollo](#))

## Introduction

The metaverse refers to a collectively shared virtual space that arises through the convergence of virtual and augmented reality, as well as the internet. It's often heralded as a burgeoning, next-generation iteration of the internet, consisting of universally existent/accessible, three-dimensional, shared virtual spaces residing within a larger virtual universe.

Our [preceding report series](#) aimed to delve into the metaverse through describing its capabilities, applications, and developments individually in the context of respective, specific implementations such as [Decentraland](#), [Somnium](#), [The Sandbox](#), [Cryptovoxels](#), and [Upland](#). The series provided explanations for different virtual real-estate offerings in each of these metaverse implementations and the process of buying/renting land in each, and additionally offered a description of companies that facilitate virtual real-estate offerings within the metaverse.

This report will focus on the state of the metaverse more broadly, consolidating the specifications and characteristics across each of the aforementioned implementations. In particular, this report will serve to provide an in-depth overview of the metaverse, detail and define some of its key characteristics, discuss some complementary embedded technologies, as well as compare and contrast different metaverse implementations functionally and from an investment standpoint.



## Metaverse Fundamentals

### Overview

*“The Metaverse is having a major global impact on how consumers interact, socialize and shop. It's going to be one of the biggest revolutions in computing - right up there with the mobile revolution and the internet revolution. All businesses will be forced to adopt a metaverse strategy in the next few years. Tokens.com aims to provide public company investors with exposure to the metaverse. Through owning our shares, you have direct ownership of metaverse assets.”*

-[Andrew Kiquel \(Tokens.com\)](#)

As alluded to in the introduction, the metaverse refers to the totality of all AR, VR, and internet-based virtual spaces that are shared, three-dimensional, and universally existent/accessible. The metaverse and its underpinnings have boomed in the wake of the pandemic, where traditional large gathering/interactive places (e.g., malls, concert halls, clubs, etc.) have been closed off and have been floundering. What started off in gaming has brought individuals into online digital environments for a greater multitude of shared human activities and experiences: birthday parties, job interviews, conferences, conventions, movie premieres, concerts, and much more. Concurrently, there has been an increased sense of urgency among brands, artists, service providers, and other corporate and commercial entities to adapt to these new, innovative formats and engage with their audiences in a newly-developing world where digital and physical co-presence has become not only possible, but increasingly prevalent in various regards.

Holistically, the metaverse space is relatively new, with the majority of projects currently dating back to 2016. The first implementation, as well as the one which seems to have made the most progress since inception, in the blockchain universe is that of Decentraland: a decentralized, Ethereum blockchain network-based, virtual reality (VR) platform that enables users to purchase parcels of three dimensional virtual space in the metaverse. Via Decentraland, users can explore, create, play various games, collect items, and engage in many more activities. Moreover, as alluded to previously, a number of other prominent metaverse projects have also emerged over the last half-decade, including: Somnium, The Sandbox, Cryptovoxels, and Upland.

In general, each of these implementations as well as the metaverse more broadly are in their early adoption phases: many novel features and developments are being launched, a broader segment of early users are joining, and perhaps most importantly, content is in a critical stage of development. This content, encompassing the full scope of features, product/service offerings, forms of user/customer engagement, and more, is among the most decisive factors which will likely determine the metaverses' wide scale function/utility either in the essential form of a game or an alternate, complementary reality. In sum, the broad theme which currently encapsulates the metaverse is a phase of early adoption alongside a strong push for content-development of all kinds.

Analogously, as opposed to a fast-moving tsunami, this adoption/content push has manifested primarily as a slow, steady trickle. As of late, the platforms have reached a saturation point in terms of the number of more savvy early adopters willing to engage with platforms via Metamask, or simply showing up arbitrarily/through word-of-mouth, blockchain community advertising. Instead, platforms have increasingly begun to rely on large, non-niche, wide-scale events to attract a broader audience. These include events such as:

- The Floyd Mayweather NFT Release
- Pride week focused events/parades
- Weekly artist exhibitions and parties
- Platform explorer meetups focused on new users.

Eventually, applications of the metaverse and its underpinnings are primed to become additionally advanced as well as mainstream: for instance, education may transition from learning to code online to actually learning core sciences like physics or chemistry via immersive VR-based simulations and virtual class environments. Moreover, remote work may evolve to include 3D virtual meetings providing infrastructure for large companies and industry-wide events, where one can immersively partake in presentations or cocktail parties. In effect, the future is likely to bring not only a further prominence of the metaverse in its virtual capacity, but an additional level of immersion wherein the metaverse expands to broaden users' experiences in increasingly tangible, non-virtual, reality-based formats through the forms of augmented/mixed-reality (i.e., AR/MR).

### Origins and History

The notion of the metaverse was first devised by Neal Stephenson in his 1992 SciFi novel, *Snow Crash*, which involved a premise of humanesque avatars interacting alongside software-based agents in a 3D space derived from the real, tangible world. At the time, Stephenson intended to use the term in reference to a VR-based successor of the Internet. Concepts fundamentally similar to the metaverse have existed going as far back as 1981 in the cyberpunk genre of fiction, such as the novella *True Names*.

Moreover, leading from 1980s/90s to 2000s/10s, a variety of massively multiplayer online games (MMOGs) arose which have principally similar feature to the metaverse, though only provide access to non-persistent (i.e., active only during user login/set times as opposed to universally) instances of virtual worlds that are shared among a relatively limited set of players, thereby being distinguished into "multiverse virtual worlds" as opposed to the metaverse per se.

From about the mid-2010s to 2020, the chief aim of many metaverse implementations was simply to continually drop the barriers of entry so that more members of a still relatively niche, blockchain-savvy community could engage, interact, and develop/deploy early forms of content across the variety of platforms. This could be considered the "innovator" or pre-early adopter phase of development. As alluded to previously, the metaverse has usurped this phase, in turn now entering the stage of early adoption, where a broader swathe of users are coming in not just to create content, but as well with a larger emphasis on exploring and engaging with the community relative to the previous phase.

## Defining Characteristics

Some of the key characteristics that comprise the metaverse and the general consensus of it in the status quo include some of the following:

- **Interoperability:** Digital assets and information in the metaverse can be interchanged throughout a variety of digital worlds, networks, and environments.
- **Content/Experience Hosting:** The metaverse is capable of displaying information, experiences, and content that is omnipresently available to users. Moreover, content on the metaverse is likely to be created in a quasi-decentralized form by a broad variety of sources, much like Youtube in the current context (e.g., Youtubers/YouTube creators). Users engage with content, experiences, and activities more broadly via their unique digital avatars, each with idiosyncratic attributes and properties, such as distinct, NFT-based wearables available for purchase on markets like OpenSea.
- **Size unconstrained:** The metaverse is capable of hosting audiences and groups of virtually any size at any given time, being unconstrained by bandwidth and similar traditionally limiting factors. In the status quo, this is commonly achieved technically through a process known as sharding (see *Embedded and Complementary Technologies*), though may evolve to more robust mechanisms as technology evolves over time.
- **Constant availability:** The slew of worlds and digital assets that comprise the metaverse are constantly available to all users: a user logging off doesn't equate to the digital world in that area becoming shut off, but similar to modern large multiplayer video game, the digital world/environment persists and is available whenever users decide to log back in.
- **Multi-Device accessibility:** The metaverse is theoretically accessible using a variety of different devices and ISP providers, akin to how traditional websites like Facebook, Youtube, and Google work.
- **Transactability:** True to the real, tangible, world, the metaverse encompasses a functional economy that allows users to buy/sell a tremendous variety of goods and services, such as event tickets, vehicles, wearables, and more. The transactable nature of the metaverse in this form will likely expand rapidly over time with increased good/service-providers entering the space over time..
- **Multiplatform:** The metaverse consists of a complex network of different platforms, applications, and digital worlds, despite many features of it being interoperable/connected in nature.
- **Governance:** Various implementations within the metaverse vary from being centrally-managed/planned to decentrally governed by democratic election processes and similar mechanisms, such as in the case of community-owned decentralized autonomous organizations (DAOs). The

totality of the metaverse itself across the breadth of existing implementations is not necessarily owned/managed by any group/entity, much like the totality of the internet in modern times.

### Embedded and Complementary Technologies

In addition, the metaverse makes use or will make use of a wide variety of both current and future technologies, including some of the following:

- **5/6G Networks:** 5/6G networks will enable the high-quality streaming of real-time data and content with respect to applications within the metaverse.
- **AR/VR/MR Devices:** A variety of access devices with AR, VR, and MR capabilities are/will be necessary to engage optimally with the whole slew of applications within the metaverse. These include the likes of AR/VR goggles such as Facebook's Oculus Quest, the HTC Vive, various glasses-based implementations that many companies are actively investing in, and more.
- **Languages/Protocols:** There is a diverse array of protocols and languages that underlie/will underlie both the applications and mechanisms for content delivery that exist within the metaverse.
- **Cryptocurrency:** Cryptocurrencies with minimal transaction fees and public-monitoring/auditability enable on-platform, trustless, P2P transactions to support the functioning economies within the metaverse.
- **Non-Fungible Tokens (NFTs):** The ownership of virtual items and broader digital assets in the metaverse is/will be easily verifiable and transferable via the use of NFTs, which are supported by the underlying secured blockchain networks which enable broader cryptocurrencies as well. NFTs will also facilitate a change in the way digital rights of assets and content are distributed and licensed not only in the metaverse, but in broader applications as well. Click [here](#) to read our comprehensive report on NFTs.
- **Sharding:** Akin to managing server capacity and latency on blockchain networks, metaverse developers are/will likely continue to use sharding to enable users to attend large, live, bandwidth-intensive events in a given location simultaneously with minimal latency and related issues. Fundamentally, sharding in this context involves creating batches of users and assigning each batch with a unique digital venue, where the event can then be broadcast to each batch at the same time. This would enable millions of users to attend the event in ensemble and be part of a shared, similar experience without imposing too heavily on the underlying infrastructure of the system. In essence, sharding is a database architecture implementation that enables the spreading of loads digitally. In the context of a popular MMOG, sharding was employed in the Travis Scott Fortnite performance, where 12.3M concert attendees were not actually all in the same universe, but rather split up into 250,000 virtual copies of the same universe capped at 50 participants per piece.

- **Smart Contracts:** The metaverse allows/will allow users to develop and execute complex transactions among a barrage of service providers and other users within virtual worlds (e.g., corporate/commercial brands, individual content/asset creators, etc.). Moreover, smart contracts will also enable functionality for application providers within networks to manage their contracts and relationships with their entire user and vendor base.

## Economy

In terms of economy, similar to tangible counterparts in reality, the metaverse contains/will contain larger and more well-connected virtual economies, inclusive of activities such as advertising, shopping, fashion, concerts, charity, property/real-estate, gambling, activism, and much more. As alluded to previously, many of these applications are/will be governed and facilitated by cryptocurrencies and P2P transactions in regards to mediums of exchange between users. Indeed, such is the case with the largest metaverse platforms in the status quo, including Decentraland's MANA, Somnium's CUBEs, Sandbox's SAND, and more. Unlike a variety of gaming platforms with native currencies in the status quo (e.g., Fortnite and VBucks, etc.), the native tokens of these metaverse platforms by and large are convertible into fiat via third-party exchanges (i.e., CEXs/DEXs). In the cases in which the tokens may not be directly convertible, users are often able to acquire NFT-based assets (e.g., property/land parcels, wearables, etc.) using the native tokens, which in-turn are able to be sold for fiat on a variety of NFT marketplaces (e.g., OpenSea, etc.).

As alluded to previously, a large component of onboarding new users into the metaverse space has been the continuous development of content. A few years ago when metaverse content was sparse, platform developers/managers had to incentivize a variety of other content/development producers to lay a content foundation, resulting in a handful of niche, high-cost development companies. For instance, online businesses used to pay these developers \$60,000-\$70,000 (USD) to commission a version of their business in the metaverse; this same commission costs about \$5000-\$6,000 today as a result of more development companies forming which has increased competition thereby placing continuous downwards pressures on development prices.

That being said, it's worth noting that a lot of this content is built on-top of land parcels which have skyrocketed in value over 2020-2021. This in conjunction with relatively high development costs as well as the need to own multiple connected land parcels (i.e., estates) for appreciable builds means that metaverse platforms may start to face bottlenecks in terms of content generated from average community users, in turn placing further reliance on larger mainstream commercial/corporate interests with the budget to finance such developments.

Lastly, it's worth noting that in the upcoming post-early-adoption era (e.g., 2023 onwards; the "early majority" phase of the adoption curve), there are three divisions of likely owners/users that will comprise the metaverse/virtual world:

1. **Speculators:** This segment of users is simply sitting on land/property parcels within the metaverse, patiently waiting for the continued expansion of city limits, urban sprawl, and thereby property values. A sub-group within this larger segment is simply waiting for the likes of

larger brands/corporate interests (e.g. Atari, Fidelity, Dolce & Gabbana, etc.) to enter the space and purchase large swathes of land for commercial uses, thereby leading to further value appreciation of speculators' parcel/property holdings, platforms, and the metaverse more broadly.

2. **Builders:** This segment of users focuses on building out additional content to continuously drive/stimulate user-adoption. Indeed, a fitting phrase that encompasses this segment's modus operandi is: "if you build it, they will come". While this segment has largely arisen from those building content directly on these metaverse implementations, an increasingly valuable subset of builders are brick-and-mortar businesses building a presence in the metaverse (e.g., amusement parks, metaverse consulting companies, gaming companies, fashion brands, etc.).
3. **Leisure Participants:** This segment of economic participants in the metaverse is geared towards the entertainment experience, looking to partake in various leisure activities on the weekend, after work, and more through the variety of content offerings/activities within the metaverse. Alternatively, this segment looks to build their own forms of leisure through virtual replicas of homes, bars, and more.

In the status quo, the owners/directors of the various metaverse implementations currently are seeking more participants in the building category to continuously build out the various platforms' content offerings.

As alluded to previously, the last year has seen a prominent emergence of marquis brands in the metaverse. These include the likes of Atari, Dolce & Gabbana, Gucci, Louis Vuitton, Sony, Microsoft, Apple, Amazon, Google, Facebook, Epic Games, Unity, Gemini, Consensys, SM Entertainment, Valve, Linden Labs/Second Life, Brave Browser, Blockchain Gaming Alliance, and many others.

Much like the initial wave of internet, ecommerce, and social media applications took the world by storm throughout the 2000s/2010s, many of these brands are forecasting a similar future shift with the advent of the metaverse and associated business models (e.g., Direct to Avatar (D2A); brands/creators selling their products directly to individuals' virtual avatars/digital identities). Indeed, the virtual items market that comprises the metaverse is already worth more than \$50B and is likely to produce trillions in aggregate value as a novel content and computing medium. This has led many brands to make early investments in the metaverse through establishing virtual forms of their brands/businesses and associated product/service offerings (e.g., NFT-based wearables, digital venues, etc.) to capitalize on this future growth and enhancement of real/digital experiences, which may be highly accretive to their brands and economic output more broadly.

In particular, these may include a transition from 2D to 3D web and user interfaces, such as: Amazon's website becoming converted to a virtual Amazon Shopping mall; a virtual, ad-free movie theatre for Netflix as a new revenue-generating feature to supplement their subscription model; Disney selling virtual merchandise and setting up a virtual theme/amusement park infrastructure; and much more.

Moreover, similar to the internet, the metaverse does not currently and likely won't have a singular owner, but as alluded to, brands/companies can still usurp

tremendous value from being participants/drivers of such a robust system/network, analogous to how currently some of the most valuable companies on the planet are leading internet companies. Drawing further similarity to the emergence of the internet, the metaverse is also primed to produce the same diversity of economic opportunity, with new companies, products/services, and employment opportunities emerging associated with platform-related content creation, distribution, delivery, security, and more.

Somewhat mirroring this pronounced metaverse emergence and as an increasing proportion of younger generations enter the workforce, they are increasingly looking to a variety of online mechanisms in the form of jobs, entrepreneurial ventures, side-jobs/hustles, and more. The combination of their exposure to online offerings throughout childhood/adolescence (i.e., gaming, streaming, video-watching, etc.) as well as an increased reliance on virtual media in the wake of COVID-19 lends well to the metaverses' growth potential among this demographic.

Some studies have suggested that over 50% of children today will take on jobs that currently do not exist. Indications of this have been observed with the NFT boom, where a slew of creators, artists, and architects have been able to produce considerable value/earnings through designing and monetizing digital wearables and real estate; these metaverse-linked NFTs represent the fourth largest market for NFT sales, even outselling tokens linked to crypto-art. As well, blockchain networks which support the metaverse ensure that this work and associated earnings are verifiable and secured over the NFT's lifetime, reaffirming direct control and access to the value delivered to users.

### Monetization & Valuation

In many ways, monetization of one's assets in the metaverse mirrors that of reality. For instance, users can collect rent on their commercial/residential properties from other tenants, hold land/property parcels and wait for price/capital appreciation (i.e., "flipping"), offer and transact for a variety of products/services on-platform, among others.

The platforms themselves, either centrally governed with a management team or run decentrally via DAOs, in turn take fees from each of these mechanisms/transactions on-platform. That being said, there are some key considerations worth noting about the metaverse and associated monetization in this regard which differ from the physical world. First, there is a paucity of regulation relative to the physical world: for various building and transactory activities, approval from various agencies and regulatory bodies is necessitated in traditional, physical real estate; this is a redundancy in the metaverse. In a related vein, there are no specified building codes which builders are mandated to adhere to. Additionally, properties in the metaverse are free from property-taxes and related expenditures. In essence, while a lot of the underlying business logic translates directly from the real world into the metaverse, the metaverse does away with a lot of the traditional bureaucracy and red-tape.

A final key monetization consideration is that virtual real estate in the form of land/property parcels within the metaverse may be more illiquid relative to other metaverse-related asset offerings, such as associated tokens. This is because

land/property prices are denominated in the native token, and while the native token may skyrocket in value, there may not always be commensurate market demand for the associated land/property parcels at these higher token prices. This may lead to a liquidity trap for land/property parcel-holders, as well as by extension a tendency for parcel-holders to become desperate and sell their holdings at a discount to their market value per their token values.

In regards to valuation, virtual real estate in the metaverse draws additional similarities to tangible real estate in reality. For instance, there is considerable overlap in terms of many of the key valuation factors, which include some of the following:

- Land/parcel sizes and dimensions
- Land/parcel location
- Proximity to key on-platform features (e.g., in-demand natural landscapes, vibrant commercial areas, etc.)
- Visual aesthetic/appeal
- Scarcity across different land/parcel types
- Strategic utility for users (e.g., completing property collections, treasure-hunts, etc.)
- Corporate adoption in various regions
- Broader intra/inter-platform macroeconomic factors

In terms of one of the most important factors, location, it's worth noting that this remains somewhat more dynamic relative to traditional tangible real estate across each of the metaverse platforms right now: locations vary in terms of their demand and thereby valuations at different points in time, largely due to factors such as large corporate/commercial interest creating new valuable locational hotspots, urban development/sprawl across different on-platform regions, among others.

As well, it's worth noting that some metaverse implementations have considered (or even in some cases implemented) the use of smart-contract based mortgages with third-party underwriters. This is predominantly contingent on higher land/parcel asset prices within the metaverse for mortgages to make sense, with some experts suggesting a minimum price threshold of \$25,000 - \$35,000 for the least desirable and valuable land/property parcels. With continued significant metaverse adoption, growth, and resultantly higher asset valuations, smart-contract based mortgages will very likely see continued growth and implementation.

An additional important consideration for monetization and valuation purposes relates to the dimensions of land/property parcels. In particular, users should obviously consider their desired width/lengths as a function of their respective functions and use-cases (e.g., larger vs smaller commercial/residential complexes, etc.), but also importantly consider height and its associated thresholds. For instance, users may acquire 1000 single parcels with a maximum build height of two stories, or at least 100 parcels connected to form a kind of estate which enables a higher maximum build height. In this way, users need to consider both their length/width as well as height requirements for their developments to choose the build/development formats which suit them best.

Lastly, users should also importantly consider whether or not they intend to expand/their respective feasibility of doing so before they begin any building. An analysis of expansions if they may be planning to build in the future enables users to know approximately how much land is for sale around their builds as well as gauge potential associated costs. If users neglect to conduct the due diligence on this preemptively, they may end up paying significantly more when it comes time for expansion relative to if they had done so before.

### Culture and Community

*"In the same way Internet Websites mostly took over brick and mortar in traffic and opportunity, a similar event will happen between Websites and virtual spaces. Because why browse a website when you can teleport yourself into an immersive customized experience?"*

-[Joaquim Miro](#) ([GDA Capital](#))

Concerning culture and community, it's worth noting that alongside the metaverse more broadly, both of these facets of the metaverse have seen tremendous growth over the course of the pandemic through a renewed interest and value in digital experiences and interactions across work, formal education, social media, gaming, and a barrage of other applications. In effect, while in-person contact has diminished, there has been an accelerated digital transformation across both traditionally innovation-embracing and reluctant organizations.

The metaverse has and will continue to catalyze the emergence of novel social modalities: for instance, AI and cloud-based streaming integrations may enable users to enter persistent virtual worlds to discover new experiences spontaneously. Effectively, this represents a transformative community interaction from those that are purposefully based around activities, to those that are more spontaneous and focused on interpersonal interactions. This trend has previously manifested in open-world video games such as *Grand Theft Auto V* online and *Call of Duty: Warzone*, though has been constrained by platform/professional content. More immersive metaverse experiences, such as those within the blockchain domain, make heavier use of prolific, user-generated content (UGC). Moreover, some current implementations as well as a larger set of future ones will likely make use of AI assistive/wholly generated content to a larger extent as well.

Additionally, the metaverse has also drawn comparison to the structure, subcultures, and communities that have evolved in the online worlds of games such as *World of Warcraft* and *Grand Theft Auto V*. Various subcommunities within each of these worlds tend to develop around centrally-linked applications, interests, use-cases, events, activities, geographies, and general purposes. Some such engagements include:

- The Floyd Mayweather NFT Drop in Decentraland
- Nature Exploration Meetups in the The Somnium Space
- Space-Themed Art Exhibitions in CryptoVoxels

Additionally, much like the renditions of characters in these games, users within the metaverse have significant autonomy with respect to the appearance, behavior, and overall characteristics of their representational avatars across

metaverse implementations. While a considerable portion of these characteristics are provided idiosyncratically by different metaverse platforms, there is also a large element facilitated through the use of NFT-based assets (e.g., wearables, tools, etc.) which are available through a variety of third-party marketplaces, such as OpenSea.

Key differentiations for the metaverse from traditional gaming platforms/communities include the fact that multiplayer gaming sessions in such games are intrinsically limited in scale, supporting fewer players in a single server instance, as well as the fact that such games may produce socializations centered around specific activities (e.g. *Fortnite's* battle royale mode or on-platform concerts). More open-world centric games have introduced unstructured play wherein players are able to freely explore virtual worlds and complete objectives in their desired order. While this represents a greater leap towards the spontaneous nature of the metaverse, a key distinction still exists in that these worlds are constrained by the volume of content a professional team can create (e.g., the Rockstar Games developers in the case of GTA V), whereas the metaverse seeks to source content from virtually any member of the community.

That being said, sourcing a sustainable amount of high-quality content remains a challenge across metaverse implementations. While there is an endless stream of cost-effective, scalable UGC content in the metaverse, similar to Youtube and Twitch, quality becomes an issue given the large volume of created content. To address this, some metaverse platforms have allocated centralized teams/decentralized community filtering mechanisms for content, though this issue may persist as the metaverse and by extension the UGC content stream continues to grow. Moreover, given the requirement for users to garner new tools and development skills within the various metaverse implementations, it logistically makes sense for there to be significantly more consumers than content creators, which may not be the case universally across metaverse implementations in the status quo in their nascent, yet high-growth/scaling phase.

As alluded to previously, AI is a likely catalyst for both quantity and quality-related UGC concerns within the metaverse. This will likely manifest in the form of both AI-assisted human creation, which further democratizes content creation through enabling users to translate their high-level ideas on-platform assets with minimal programming/development on their part. Early traces of this already exist with the in-depth UGC, drag-and-drop building platforms on metaverse implementations such as Cryptovoxels and The Sandbox, which has effectively broadened the content-development process and possibilities on these metaverse platforms to a user base well-beyond savvy developers and technologists. The next frontier of this would involve automatically-generated content by trained AIs which would further bolster on-platform quantity and quality perhaps eventually beyond the caliber of human-developed content. In turn, this AI-facilitated/generated, content-rich ecosystem would further promote the nature of the metaverse as one with spontaneous social experiences focused on interactions over pre-specified events.

In essence, through both UGC in the present and its next iterations, the metaverse is redefining interactions in virtual environments and digital space online, bringing with it the next generation of applications, activities, use-cases, and platforms for consumers and organizations alike.

## Comparing Virtual Blockchain Worlds (VBWs): Metaverse Implementations

As alluded to previously, the metaverse and blockchain are inherently compatible given the need for a decentralized infrastructure upon which community-centric, open-world metaverse implementations can be built. This gives rise to metaverse implementations in the form of prominent virtual blockchain worlds (VBWs). As outlined in our previous series, some of the principal blockchain-based metaverse implementations in this regard include the following as described below.

### Decentraland

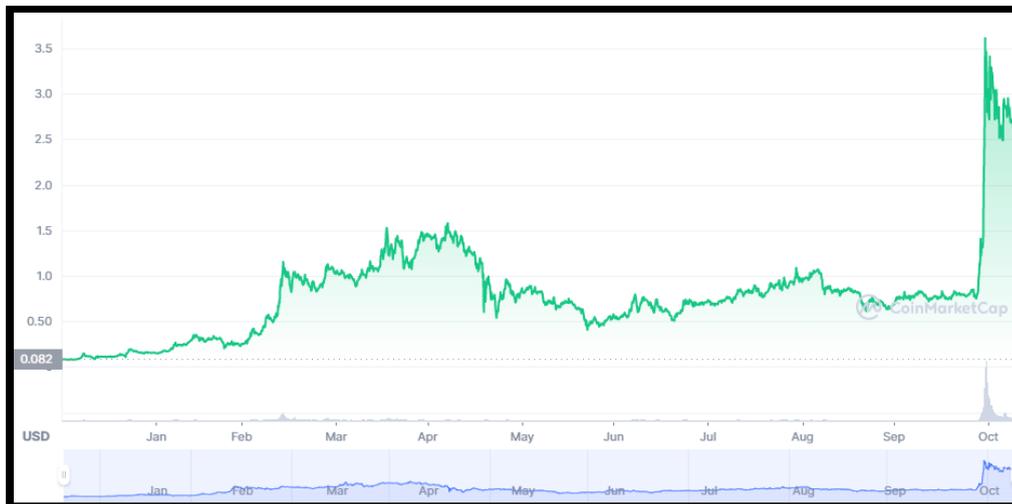
One of the most popular platform implementations within the metaverse space involves Decentraland, which is arguably the first entirely decentralized, virtual world. Created in 2017 alongside the emergence of the famed CryptoPunks and CryptoKitties, Decentraland is a decentralized, Ethereum blockchain network-based, virtual reality (VR) platform that enables users to purchase parcels of three-dimensional virtual space in the metaverse (i.e., VR world). Via Decentraland, users can explore, create, play various games, collect items, and engage in many more activities. Moreover, decentraland enables users to produce, experience, and monetize their own applications and content.

Decentraland also enables users to transact for digital assets, such as land parcels/estates, wearables, names, and more on its digital marketplace via its native token called MANA. Decentraland users are also capable of building 3D architectural builds and items via the platform's easy-to-use drag-and-drop building infrastructure. The Decentraland team has also incentivized building activities through various thematic build competitions. Building, understanding, and interacting with the Decentraland world more broadly is facilitated through the platform's in-depth documentation, and users can maintain strong contact/interaction via the platform's social media (i.e., Discord, Twitter, Telegram, etc.). Like other metaverse implementations, community and related events are at the forefront of the Decentraland experience.

LAND in Decentraland takes the form of an NFT-based digital asset maintained by a smart contract and is divided into distinct parcels which are traversable and identifiable via cartesian coordinates (x, y). These parcels are each 256 square meters, owned by community members, and are acquired via MANA. Parcels are combined to form themed communities called DISTRICTs, enabling like-minded community-members to interact and engage with each other.

Decentraland is run via a decentralized autonomous organization (DAO), thereby governed by users and as well manages the smart contracts and assets that comprise Decentraland, inclusive of: the LAND contract, Estates contract, Wearables, Content Servers, and the Marketplace. Decentraland users determine the policies involved in the world's behavior via the DAO through community-based proposing and voting concerning policy updates via the DAO governance interface. The DAO's security and functioning is supported by the Security Advisory Board (SAB) on-platform.

As of writing, Decentraland has a market capitalization of approximately \$4.66B (USD), with its native utility token, MANA, trading at roughly \$2.57 with 24H volume of over \$1.63B. In accordance with the broader metaverse's explosive growth throughout the COVID-19 pandemic and Facebook's recent Meta announcement, MANA is up roughly 3,146% YTD and roughly 9,895% since inception.



### Somnium Space

Somnium is an open, social, and persistent VR world with its own economy and currency, marketplace, social experiences, games, land ownership, and more. It's intended to be entirely interconnected and immersive, granting access from any device from 2D mode on desktop (e.g., users can chat, trade, and build on the Somnium PC client) to VR mode on desktop/mobile (e.g., live VR mode inside the Somnium world). As of late 2020/early 2021, Somnium has also developed compatibility with the Oculus Go and Quest. Some of the key characteristics of Somnium's platform include: ownership security; origin authenticity; an open, social, persistent Blockchain VR Metaverse; tradable/translatable via decentralized marketplaces; build with proven/secure standards; variety of creative tools such as an SDK and builder; and a cross-platform VR client. The Somnium team ultimately strives to build a next-generation communication, e-commerce, entertainment, and living hub through facilitating physical reality's interoperability with VR technology and philosophy.

Mechanically, the Somnium platform makes use of cross-platform usability, customizable PC client, long-term livability, blockchain integration, a persistent social VR world, ownership of virtual land, programmability and scriptability, as well as space monetization. Some of Somnium's key partners to help foster increased adoption and growth of its ecosystem include Pimax, Sony, Microsoft, Admix, Polygon, OpenSea, VR Education, Blockchain Gaming Alliance, High Fidelity, JanusVR, and Gemini. Like Decentraland and the host of other metaverse implementations, Somnium places a big emphasis on community with a wide variety of events such as weekly development meetups, explorers' club, disco night,

art exhibitions, virtual cinema meetups, and more. Much of this community activity is facilitated by social channels like Discord, Twitter, Facebook, and others.

Somnium is perhaps the most immersive and VR-centric/compatible metaverse platform, offering compatibility with all the major VR headsets (e.g., Oculus, HTC Vive, HP, Valve, Windows MR headsets, etc.) and others. Somnium also provides a well-built native builder optimized for desktop, where users can build a wide-variety of creations as they desire with relative ease. The platform's in-house server architecture enables thousands of users to interact simultaneously in the same persistent VR world without the need for sharding or mirrored instances, creating an extra-immersive experience. Somnium's Unity-based SDK enables a high-level of flexibility relative to other platforms in terms of creation of detailed, customizable, and unique user avatars.

Additionally, Somnium's economy aims to make heavy use of its VR platform with a focus on socialization, leisure, work, bartering, and content creation at a level beyond what technology has accomplished over recent history. Somnium lays additional groundwork for this through its operation on the Ethereum blockchain network, enabling trading of digital goods and services while maintaining safety, privacy, encryption, traceability, authenticity, and verification of ownership. The economy is based fundamentally on the tokenization of virtual land and digital assets/experiences (e.g., concert tickets, cars/vehicles, wearables, etc.) in the form of NFT-based assets, as well as the exchange and trading of these assets via decentralized marketplaces and direct P2P mechanisms among avatars. Its native ERC20 token is the Somnium CUBE, which facilitates, exchange, purchase, and broader platform transactions. Somnium also makes use of the Layer 2 Solution Polygon to hedge against high gas fees on the Ethereum network during periods of transaction congestion.

The Somnium Space also makes use of measuring one's social status and how others perceive them via one's Karma level, which is calculated through a variety of factors including: build activity, organization/participation in events, play time, and more. Users can potentially earn CUBEs on the basis of their Karma levels or rewards convertible to CUBEs. Somnium supports monetization and business models through a variety of product/service offerings, including selling tokenized digital assets/avatars, NFT collector exhibits, streamers, the creation of store presences within the Somnium space, developers building for fees, and more.

Additionally, it's worth noting that Somnium has a smaller subset of land compared to other metaverse implementations with 3000 - 4000 total parcels, though by the same token also providing bigger build-space. The waterfront is a hot commodity within the space, with users paying a premium for parcels in proximity to it. Moreover, it's worth noting that Somnium has had among the largest amounts of user adoption proportionate to its land base relative to almost all other metaverse implementations, with events often hosting more than several hundred people. Somnium has not sought/achieved as much corporate/enterprise adoption relative to other metaverse implementations either due to an ethos of maintaining a small but vibrant community or simply still being earlier-stage in this regard. That being said, Somnium has focused and delivered heavily on the technical and utility-focused aspects of the platform, thereby strongly enhancing users' recreational experience on-platform.

As of writing, Somnium Space's native currency token, CUBE, trades at roughly \$14.93 USD, up 3x since being launched in late May. CUBE has \$4.21M in 24H trading volume with a fully diluted market cap of \$1.48B with a max supply of 100,000,000 coins. The top exchanges for Somnium Space CUBEs ordered by volume include: Uniswap (V2), Gemini, 1inch Exchange, and 0x Protocol.



### The Sandbox

The Sandbox is a community, user-generated-content (UGC) driven platform where creators are enabled to monetize digital assets and gaming experiences in a decentralized, blockchain-based environment. The platform offers a wide variety of gaming experiences (e.g., Viking Fjord, Mushroom Mania, Sweet Village, etc.) with a very similar style and format to the popular video game, Minecraft, developed by Mojang Studios. Sandbox's ultimate vision and goal is to disrupt game makers in the status quo (e.g., Minecraft, Roblox, etc.) by providing creators with true forms of ownership of creations in the form of NFTs, in-turn rewarding them for their participation in the ecosystem.

VoxEdit is The Sandbox's leading building application enabling users to create, rig, and animate their own voxel-based NFTs in the form of objects including animals, foliage, tools, people, and more. These NFT assets are in-turn capable of being sold on Sandbox's NFT marketplace, where users can search and buy these assets with the platform's native token, SAND, and incorporate them into their LAND holdings. Many of these NFT assets have been produced in partnership with corporate/enterprise partners such as Binance, Atari, The Smurfs, Care Bears, CoinMarketCap, Avenged Sevenfold, Gemini, Deadmau5, FTX, and more. These NFT assets are catalogued in the marketplace with respect to LAND, ENTITY, EQUIPMENT, ART, and WEARABLES, as well as other characteristics, to create an efficient and effective shopping experience for NFT-transacting users.

Additionally, the Sandbox Game Maker enables users to build 3D games with no coding requirements as well as through Vox Models/NFTs created by VoxEdit. Their easy-to-use building interface enables virtually any user to unleash their creativity and imagination with respect to constructing desired on-platform designs. Users

can share these games in a gallery with friends/other users or the community more broadly once complete. Users can also monetize their games, and players can also partake in a play-to-earn model and monetize the playing of games. Users can receive subsidies and resources from The Sandbox's Game Maker Fund for the creation of high-quality games.

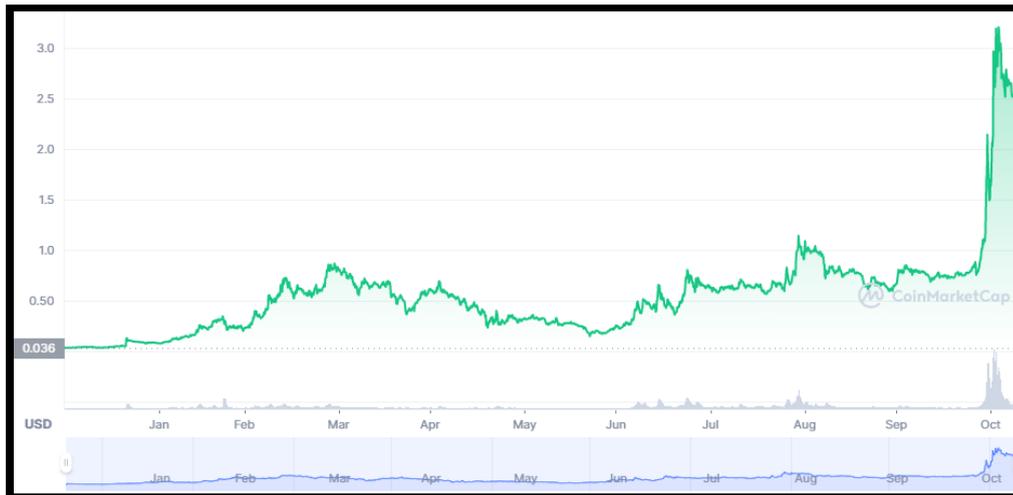
Within Sandbox, LAND takes the form of an ERC-721 token and can have various experiences built atop it (i.e., ASSETS) once owned. Like other metaverse implementations, LAND can be combined to own an ESTATE where creators are empowered to create larger and more immersive on-platform experiences. ASSETS are tokens produced by players that build/assemble UGC and employ the ERC-1155 token standard; they are tradable on the Sandbox marketplace as NFTs as alluded to, and are the chief creative elements in the context of the Sandbox Game Maker. GEMs and CATALYSTs are ERC-20 tokens that define the characteristics of ASSETS via utilities within the Sandbox metaverse (i.e., tier, scarcity, rarity, etc.). In addition to transactions, SAND is employed for interactions, value transfers, and liquidity provision via staking and governance; it is an ERC-20 token built atop the Ethereum network, and is available on Binance, Huobi, Uniswap, and a variety of other exchanges.

Sandbox promotes user monetization via building/playing games, selling ASSETS, and owning LAND, and monetizes as a platform via a fee capture model where 5% of all transacted value is collected via marketplace transaction-related fees with the remaining 95% collected from premium NFT/ASSET sales, LAND sales, and subscriptions. 26.50% of SAND transaction volume is returned to the Sandbox Foundation for funding games, distributing grants, supporting local community managers, and more.

Some of Sandbox's largest partnerships include Atari, Polygon, Shaun the Sheep, SBS Game Academy, The Smurfs, Square Enix, Roller Coaster Tycoon World, Animoca Brands, WAX, Maker, CryptoKitties, Helix, BGA, and more. Additionally, Sandbox has striven to increase its presence in Asia through supporting gaming/creator communities in the gaming staples of Korea and Japan. As of June 2020, the project had over 15,000 users with connected wallets and 750,000 followers across Facebook, Discord, Telegram, and more with significant growth following platform launch in Q4 2020. Sandbox has raised a seed round with a total raise of \$4.21M USD plus considerable additional funds via its Binance SAND IEO in August 2020, with additional funds coming from numerous LAND parcels being sold through platform-driven pre-sales. The team and advisors consist of over 30 seasoned members across South America, Europe, Asia, and the US, with domain experience in AAA game-development, pioneering blockchain engineering initiatives, and leading blockchain/gaming companies.

It's also worth noting that, unlike Decentraland and similar to Somnium, Sandbox is non-decentralized at present. Moreover, it originated as an established game and has grown into a metaverse-type platform, with a significant user base coming over from its initial renditions. It has a larger supply of land relative to both Decentraland and Somnium with 300,000 parcels. Additionally, aforementioned content-bottlenecks, related monetization, and consequent broader/sustainable user adoption as it concerns the metaverse may become increasingly pronounced problems for Sandbox in its current game-centric state as the metaverse progresses.

As of writing, The Sandbox's native currency token, SAND, trades at roughly \$2.47 USD, up 68.6x YTD. SAND has \$1.19B in 24H trading volume with a market capitalization of \$2.2B. Furthermore, SAND has a circulating supply of 892,246,119 with a maximum supply of 3,000,000,000 tokens, or a roughly 30.0% share of maximum supply in circulation. Some of the top exchanges for The Sandbox's SAND ordered by volume include: Binance, Uniswap (V2), Huobi Global, Bithumb, KuCoin, Gemini, Gate.io, and many more.



### CryptoVoxels

Cryptovoxels is a virtual world built atop the Ethereum Blockchain network. The world consists of a city referred to as Origin City, which contains streets that are in turn owned by The Corporation (i.e., a governing entity) as well as parcels that are owned by individual people, where anyone with an Ethereum wallet is capable of buying a parcel. Parcel-holders can add/remove blocks in the form of voxels as well as features on their parcels, as well as designate their parcels as sandbox parcels to enable other users to build freely on them.

Like Somnium, Cryptovoxels supports both 2D and 3D rendering, and has built-in compatibility with a variety of the top VR devices including Oculus Quest, Oculus Rift, and HTC Vive. `babylon.js` enables users to render the Cryptovoxels interface in their browsers clearly and powerfully. Users can explore the world without an Ethereum wallet or parcel by playing in free-mode, and experience a wide array of activities including galleries, curated collections, portals, and more. It's worth noting that Cryptovoxels is comparatively the smallest of all virtual blockchain worlds (VBWs) by area, though is also the only one which is continuously expanding with no pre-set limit on how large it could grow. It also features among the easiest-to-get-started on building interfaces for users, enabling them to join the world without any specified software or hardware via free-mode and begin building virtually right away via an intuitive drag-and-drop interface. Users purchase parcels, avatar costumes, and other goods via OpenSea within the Cryptovoxels space.

Much like other metaverse implementations, users take the form of customizable avatars within the Cryptovoxels world. Owning avatars is effectively like registering a username or account on a website, with avatars taking the form of unique, non-duplicable NFTs which can be owned, bought, and sold; users can own multiple such avatars in this regard. Additionally, users don't need to formally own an avatar to interact with the Cryptovoxels metaverse, as they can login as a guest and start exploring. While avatars are customizable, they take the default form of a white mannequin style. Avatar wearables on-platform are processed via the Layer 2 Ethereum scaling solution Polygon, which has enabled the cost to produce and mint wearables for in-world microtransactions to fall to around \$1 or less from previously high-levels on the Ethereum blockchain network.

In addition to in-browser, Cryptovoxels can be run on engines including VRChat, NeosVR, and Substrata. Like the other metaverse implementations, community is a big aspect of the Cryptovoxels platform, with ~10,000 registered users and active social presences across Twitter, Discord, and Reddit. While the platform is currently not decentrally owned/managed, there have been indications that a transition to this may take place in the future via a DAO implementation similar to Decentraland. Users can take in regularly scheduled events across the community, such as art exhibitions, holiday-themed parties, DJ/dance events, and more. Users are also capable of documenting and sharing their experiences throughout the Cryptovoxels community by sharing intraworld screenshots called "Womps", which also enable users to teleport to the corresponding locations instantly in-browser.

Additionally, it's worth reiterating that unlike other metaverse implementations, Cryptovoxels is capable of being entirely run within users' web browsers without additional software/hardware peripherals; the only requirements are an internet connection and a Web-3.0 enabled browser. Properties on Cryptovoxels are designated as ERC-721 tokens following the NFT token standard, and can thus be built, held, or sold and are immutable, verifiable, authentic, and easily transferable all via the Ethereum blockchain network.

Cryptovoxels was developed by independent game developer Nolan Consulting Limited out of Wellington, New Zealand in April, 2018 and is run by a highly-technical, game-development seasoned team. The project initially began as a venture to build the metaverse on the web, drawing inspiration from Snowcrash and Ready Player One. Its discreet beta was released in May 2018 with primary land sales made to team advisors and friends in June 2018, then to early-adopters via the OpenSea marketplace, then to the wider public in July 2018. Unlike other metaverse implementations, Cryptovoxels has never released a whitepaper or roadmap and has taken a relatively flexible approach to platform development, using an iterative and reactive approach via ideation and feedback from its community to implement, change, and develop on-platform functionality and concepts over time.

Popular parcels within the Cryptovoxels come with specific themes, such as Glass Age, Space Ace, The Metalith Throne, and others. Cryptovoxels previously supported an on-platform token called COLR which was used to add color blocks into the predominantly white block world; COLR became inactive in May/June 2020 as the platform ceased to support it due to its in-world use becoming redundant with color blocks becoming free to add. Following this change, Ether became the medium of exchange for microtransactions on the Cryptovoxels platform.

Additionally, it's worth noting that Cryptovoxels is one of the only VBWs that counteracts some of the Ethereum network's intensive energy-consumption for mining processes through its partnership with Offsetra, which has enabled companies and projects to offset emissions through the sponsorship of high-quality carbon reduction initiatives. This has amounted to roughly 1,528,000 kilograms of CO<sub>2</sub> emissions; the equivalent of ~120,000 Ethereum transactions or 3,829,000 miles of driving based on an average passenger vehicle.

### Upland

Upland is a novel NFT metaverse which is mapped to the real world where users can transact for properties mapped to real addresses. Users can build their dream properties, open virtual businesses, and earn USD or UPX coins (i.e., the platform's native token) by selling NFT-based properties on an open marketplace. Like other metaverse implementations, community is a central aspect, with users able to easily interact and form friendships in a positive and diverse player community. Upland is built on the foundation of three primary pillars: business, entertainment, and community.

Upland is built on top of the EOS blockchain, with each property on-platform representing a unique, unduplicable, immutable, and singularly-ownable asset in the form of a Non-Fungible Token (NFT). The ownership for each of these NFTs is recorded on the EOS blockchain, which acts as a decentralized ledger which ensures singular, true ownership. Some of the key activities which Upland users can engage in include collecting on-platform properties and completing collection sets, partaking in live events, engaging in challenge competitions, participating in treasure hunts, and more. Additionally, users are subject to community conduct regarding interactions with other players/users and Upland team members, as well as terms of use of the platform more broadly. Violations of these may result in warnings as well as users being incarcerated in the platform's version of prison aptly called Alcatraz, with the severity of their punishment and/or length of their prison stay varying as a function of the severity of the violation.

Traversing the Upland map on-platform, users can make use of both flights/air-fare for longer-range trips as well as trains for shorting-range trips, which are both relatively inexpensive based on the platform's currency, UPX. The former costs more than the latter due to convenience and speed as is generally the case in the physical world. Users' avatars, known as block explorers, wander within city locations with users clicking on points of interest as applicable. Various icons taking the form of paper airplanes called "Sends" are scattered throughout the Upland map, and can be picked up when block explorers are within close enough proximity. These allow users to transfer their block explorers to any minted property on the map for a fee denominated in UPX.

Live events on-platform typically commemorate various occasions, holidays, or special in-game events, and may involve variations of treasure hunts. Treasure hunts are immediate and novel ways to engage in upland and generate UPX, and involve standard, limited, and exclusive tiers each with different rewards and criteria. Collections consist of a series of properties which match various characteristics and enable users to earn a one-time UPX reward as well as UPX yield boosts (i.e., boosts to the income users earn from their property holdings).

These collections are pre-determined by Upland Inc., the team and game operator behind the platform, and ensure and minimize any conflict of interest.

Property transactions within the Upland platform are based on real world addresses, sizes, and coordinates as previously alluded to, with property parcels having unique color codes to indicate a variety of their characteristics (i.e., light green if they are within range of the user, dark green if they're owned by another user, gray if the property has never been minted, etc.). Users can see information about minted properties by clicking on a menu that shows key information about them (i.e., size, price, current/previous ownership, etc.). Properties offer a standard annualized yield of 17% of the property's minted (i.e., initial) value, though as alluded to previously can be boosted through a variety of mechanisms. Additionally and similar to other metaverse implementations, users are able to advertise their desire to transact for properties to community members via the platform's social media channels, inclusive of Discord and Telegram. The negotiating, trading, and selling within these channels is one of the most immersive and community-centric aspects of the Upland platform.

Uplanders collect property for a variety of purposes in the status quo, including strategic locations for treasure hunting, aiming to complete collections, investment/flipping opportunities, simply for the pleasure of owning virtual property, among others. One central ethos of the Upland platform is the notion of "True Ownership" via NFTs, with properties/items more broadly in Upland being represented as NFTs on the EOS blockchain, and via users having net worths in excess of 10,000 UPX being provided with private keys generated via their email/password combinations only being held and managed by the users as opposed to the platform's back-end; the Upland team does not have access to these ownership-bearing aspects of users. Additionally, the non-fungible nature of many on-platform assets in conjunction with the influx of traditional money into the Upland ecosystem has resulted in a genuine supply-and-demand based marketplace centered around this notion of "True Ownership" on-platform.

The Upland team consists of a globally distributed team with the platform's origins tracing back to the initial prominence of collectible-based NFTs such as CryptoKitties around early 2018; the founders were inspired to tokenize properties within the physical world through the same technology. The team soon after raised a seed round from FinLabAG out of Germany, with development beginning in December 2018. The team's current plans include an NFT gateway enabling users to import NFTs from other blockchain, drivable vehicles, residential/commercial property development, the introduction of businesses on-platform, as well as offering new mintable cities available on the map both within the US and internationally.

The team's advisors include seasoned veterans from the gaming, public relations, and blockchain industries, and lead investors include FinLabAG (i.e., one of Europe's largest/primary investors in fintech/blockchain) as well as EOS VC and Block.One (i.e., investment funds encouraging commercial development via EOSIO, EOS's open-source blockchain development platform). Some of Upland's most prominent partners include Tilia Pay/Second Life (i.e., offering an important integration for users to sell their property assets for USD in addition to just UPX), Wombat, Bad Crypto Podcast, Meet.ONE, BGA, and Brave Browser.

Lastly and similar to Cryptovoxels, Upland places a considerable emphasis on the sustainable use of blockchain, partnering with the EOS Authority and ClimateCare to offset an entire year's equivalent of CO<sub>2</sub> emissions for the whole EOS mainnet. This equates to roughly 281 tons of CO<sub>2</sub>, and in-turn supports many UN Sustainable Development Goals (SDGs) per these organizations' collective mission with this endeavor.

## Investing, Buying & Renting Land: The Metaverse & Metaverse Property

*"We are now seeing more public exposure than ever before around the metaverse. A lot of companies are investing exorbitant amounts of money to be at the forefront of what many believe will be a trillion dollar industry. The interesting thing about all of this is that the majority of the population still thinks that the metaverse is a fictitious thing. The fact of the matter is not only is it already real, but I believe the adoption into the mainstream will move a lot faster than everyone thinks. There are a lot of groups doing amazing things both in the public eye and in stealth that will shift and speed up the narrative."*

**-Ryan Schuler (The Mxnt Group)**

### Investing, Buying, & Renting with Metaverse Property

Beyond the shift brought about by COVID-19, VBW metaverse implementations are becoming increasingly interesting investment opportunities for both institutional and retail investors alike. As interactive/engaging content increases across the platforms, the platform garners greater value and compellability, thereby in turn attracting more users, and in turn a more robust community, a broader array of product/service offerings and corporate/commercial adopters, and a more vibrant economy laying the foundation for even more interactive/engaging content offerings. The net result in this form is a virtuous cycle that may continuously propel VBW metaverse implementations and their collective value proposition.

An additional consideration for VBW metaverse implementations' value proposition arises from the NFT market: consider that last year, the NFT market tripled in size with very strong momentum carrying forward into 2021. As more wearables, collectibles, and art become represented by NFTs and with broader general investment in the space, the demand for a mechanism for storage and display of these digital assets will continuously increase. VBW metaverse implementations are prime storage and display mechanisms for these digital assets, thereby adding an additional dimension to these platforms' value proposition.

Despite virtual land/real estate becoming an increasingly valuable emerging asset class via the metaverse, many investors may be overwhelmed by the novelty or complexity of buying/renting/investing in digital real estate across various metaverse implementations.

To this end, one of the GDA Groups' partners, [Metaverse Property](#), has endeavored to make the process of transacting with virtual real estate more seamless through a variety of service offerings.

Metaverse property is the first VR-based real estate company in the entire industry, providing exposure to the emerging virtual land industry throughout a variety of metaverse implementations, including: Decentraland, The Sandbox, Somnium, Cryptovoxels, and Upland. Metaverse property facilitates virtual property purchases and sales in addition to a suite of other services spearheaded by pioneers in the NFT and blockchain industry. Some of these services include:

- **Property Management:** Inclusive of renting property to clients, maintenance of technical and visual aesthetic, collecting rents from clients, point of contact for all client-related issues and inquiries.
- **Property Development:** Managing the architecting, designing, and developing the build, as well as establishing on-map development.
- **Consulting:** Helping property owners/renters make important decisions in VR-based real estate using their knowledge of virtual land across metaverses as well as the blockchain industry more generally.
- **Marketing:** Metaverse Property has strong access to the burgeoning advertising network that exists across the various metaverses. Moreover, the team has considerable experience in marketing various blockchain and NFT-related projects. As such, they have a demonstrated ability to increase exposure and can do so for virtual land or businesses.

Additionally, Metaverse Property has assembled the first virtual real estate investment trust (i.e., Metaverse REIT), providing investors exposure to the best real estate assets in the metaverse without onerous barriers to entry such as developing the technological savvy in the blockchain and metaverse market spaces. Consumers are able to get exposure via Metaverse Property's REIT token: an NFT backed by the company's portfolio of virtual land and real estate.

In particular, some of the offerings that Metaverse Property owns or offers within the various metaverses includes some of the following:

- Decentraland
  - [Global Digital Assets Estates](#)
  - [GDA Dragon Estates](#): Global Digital Asset Estates adjacent to Dragon City.
  - [GDA Crypto Valley Estates](#): Meeting place for startups and investors to connect.
  - [GDA Aetherean View](#)
  - [GDA Plaza Estate](#)
  - [University connected district parcel](#): A nice parcel on the freeway of University, deployed nicely within the district. Good for volume/traffic as a result of its proximity to the freeway.
  - [Anarchy International connected district parcel](#): A parcel of land located at the coordinates  $(x, y) = (30, 65)$  in Decentraland.

- [Conference connected parcel main road](#): This parcel represents an ideal business/commercial opportunity due to the robust activity around it and prime location.
- [Fashion Street Estate](#): Among the most affordably priced estates within Fashion Street.
- [Large Genesis Plaza Estate](#): This represents one of the largest estates for sale within all of Decentraland, with a great location in close proximity to Genesis Plaza.
- [Blockchain Names Estate](#): This estate involves some of the top blockchain domain names in the world, including: BlockchainJobs.com, CryptoInsurance.com, BlockchainSports.com, and NewYorkBlockchain.com
- Somnium Space
  - [Extra Large #3361 \(XL\) parcel in Somnium Space](#): A parcel with a size of 1500 square meters and with 50 meters in height and depth build limit located at coordinates (x, y, z) = (1641.59, -5.66, -1086.69).
  - [Extra Large #3340 \(XL\) parcel in Somnium Space](#): Extra Large (XL) parcel in Somnium Space with a size of 1500 square meters and with 50 meters in height and depth build limit located at (x, y, z) = (-728.51, -5.52, 384.3).
- The Sandbox
  - [38 Individually Connected Lands](#)
  - [3x3 GameCredits Estate Attached to 12x12 Sandbox Estate](#)
    - Location: (x, y) = (54, 12)
  - [3x3 GameCredits Estate Attached to MakerDAO](#)
    - Location: (x, y) = (33, 27)
  - [3x3 GameCredits Estate Attached to MakerDAO](#)

Metaverse Property is committed to a vision of the future that emulates Ready Player One, where both businesses and real estate will exist in tandem on a new frontier involving both tangible and digital reality. The company endeavors to further this vision and commitment through a core dedication to building better places to call home by doing what's right. Additionally, Metaverse Property is headed by Co-Founders Michael Gord and Jason Cassidy, each with extensive experience in the financial, consulting, software, and blockchain spaces.

## Conclusion

*"We are quickly reaching the point in the evolution of the Metaverse where the term is becoming adopted within the consciousness of the mainstream. With the pandemic putting a large percentage of every nation's people indoors for prolonged periods of time, several have naturally used that as an opportunity to look into what the future holds. What they have discovered is something truly incredible waiting for them to explore, engage in and share with others - Welcome to the final frontier of the digital landscape.*

*These shared virtual spaces allow anyone to join an economy that has no borders and allows for unlimited creativity. Whether you are a business looking to evolve past a simple web page, an individual looking to make an investment or engage in leisure activities or even an organization looking for a new venue to engage with your supporters and fans, the Metaverse is the ultimate destination."*

*-[Jason Cassidy](#) ([Metaverse Group](#))*

The Metaverse refers to a collectively shared virtual space that arises through the convergence of virtual and augmented reality, as well as the internet. It is widely-considered as the next-generation iteration of the internet, consisting of universally existent/accessible, three dimensional, shared virtual space situated within a larger virtual universe.

Whereas the preceding report series aimed to describe the metaverse in the context of specific VBW implementations (i.e., Decentraland, Somnium, The Sandbox, Cryptovoxels, and Upland), this report focused on the state of the metaverse more broadly, consolidating the specifications and characteristics across each of these aforementioned implementations. In particular, this report served to provide an in-depth overview of the metaverse; discussed aspects of its origins and history; detailed and defined some of its key characteristics; discussed some complementary embedded technologies; detailed aspects of the metaverse economy, monetization, valuation, culture, and community; compared different metaverse implementations functionally and from an investment standpoint; as well as discussed investing, buying, and renting land in the context of a leading metaverse company with respect to the product/service offerings of Metaverse Property.

While the metaverse is still in its early stages, the continued community development, user adoption, corporate emergence, technological advance and integrations, as well as rising associated asset valuations are all indicative of the metaverse's continued growth and likely trajectory towards its stature as a next-generation, immersive, three-dimensional internet.

For any inquiries about [Metaverse Property's offerings](#) and services, please [contact us](#). You can also follow Metaverse Property on social media: [LinkedIn](#), [Facebook](#), [Twitter](#).

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