

Metaverse Industry Report

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Abstract

This metaverse industry report provides an overview analysis of the global metaverse industry and explores how world leading businesses are collaborating with developers, creators, and users to build their brands in the evolutionary virtual space. The goal of this report is to understand how the metaverse works, its current state of development, the present and future opportunities for strategic communications it presents, as well as to identify successful strategies for creating brand value in the metaverse.

Metaverse Industry Report

Introduction to the Metaverse

The term “Metaverse” is a combination of the prefix “meta,” meaning “transcending” or “distinct from” the concrete world, (Webster, 2021) and the word “universe,” to describe a vast virtual environment enabled and facilitated by internet and web technologies that blends elements of the physical and digital worlds. (Lee, Lik-Hang & Braud, Tristan & Zhou, Pengyuan & Wang, Lin & Xu, Dianlei & Lin, Zijun & Kumar, Abhishek & Bermejo, Carlos & Hui, Pan, 2021) CEO of EPIC Games Tim Sweeny describes the metaverse as a “real-time 3D social medium where people can create and engage in shared experiences as equal participants in an economy with societal impact.” (Melcher, 2022) Simply put, the “metaverse” is a virtual representation of the physical world without its natural limitations. This “Digital twin” has the capacity to facilitate the same human activity and interaction that takes place in the physical world, except in an equal opportunity environment that eliminates significant physical and cultural barriers. (Lee, Lik-Hang & Braud, Tristan & Zhou, Pengyuan & Wang, Lin & Xu, Dianlei & Lin, Zijun & Kumar, Abhishek & Bermejo, Carlos & Hui, Pan, 2021) Therefore, the metaverse not only supports social and economic infrastructures but also enables them to evolve in ways they never have in the physical world.

Architecture

Much like the internet, the metaverse is a massive network of interrelating technologies that enable its existence and drive its purpose. The virtual world still has plenty of ties to the physical, and to create and facilitate a metaverse ecosystem, must rely on technological foundations. These foundations are a mix of hardware and software that can be categorized into eight distinct technologies that enable the metaverse: Extended reality, user interactivity, artificial intelligence, blockchain, computer vision, IoT and robotics, edge and cloud computing, and future mobile networks. (Lee, Lik-Hang & Braud, Tristan & Zhou, Pengyuan & Wang, Lin & Xu, Dianlei & Lin, Zijun & Kumar, Abhishek & Bermejo, Carlos & Hui, Pan, 2021) All these technologies work together to produce a virtual user-centric ecosystem where multiple environments can be built and interacted with by multiple contributors. The drivers of the metaverse ecosystem can be classified by six main categories Avatar (virtual identity), content creation, virtual economy, social acceptability, security and privacy, and trust and accountability. (Lee, Lik-Hang & Braud,

Tristan & Zhou, Pengyuan & Wang, Lin & Xu, Dianlei & Lin, Zijun & Kumar, Abhishek & Bermejo, Carlos & Hui, Pan, 2021)

Combining the eight enabling technologies with the six drivers of ecosystem totals 14 different focus areas that work together to produce, maintain, and evolve the metaverse. There are thousands of companies across thousands of industries that invest, research, and develop in each of the 14 focus areas, making the metaverse a sort of “mega-industry.” For example: Ethereum is a tech company that create and sustains a decentralized (user-owned) block-chain infrastructure, which enables the company Anicom Brands to create an open virtual application, or “world,” called “Sandbox” that is fully created and owned by users. This user-owned platform is built by individuals and organizations purchasing virtual land and digital assets called “non-fungible tokens” (NFTs) in the Sandbox world to create unique experiences and objects for other users. These individuals and organizations work with development companies and tools to produce the NFTs, and with other companies to ensure authenticity of these assets. There are also other tech companies that enable the types of interactions in each virtual world, like virtual reality, augmented reality, and so much more. This simple example hardly scratches the surface of the interdependency of different industries that create the metaverse.

In this metaverse industry report, I analyze the business to consumer segment of the larger metaverse industry, focusing only on for-profit international organizations doing business in two of the 14 metaverse focus areas: Content creation and virtual economy. These are well known organizations in the real-world that have invested in, purchased, or developed lands and assets on open applications, such as Sandbox, to establish their brand footprint in the emerging metaverse ecosystem and reach their stakeholders in innovative ways.

Benefits to Global Brands

The metaverse is attractive to global brands for several reasons, many of which are results of the organic design and capabilities of the virtual universe. Matthew Ball, a renown media investor and professional, identifies seven key attributes of the metaverse, five of which correlate with valuable business opportunities. The first is interoperability, or the merging of different systems of interaction so that value in one system can compound in others. (Newzoo, 2021) The basic idea of interoperability is that users can create and own assets in one application that maintain their value in another application. This means creators can make and sell unique,

one-of-a-kind NFTs that can be purchased and traded amongst virtual consumers anywhere in the metaverse. Interoperability leads to Ball's second key attribute, economy. Creating, buying and selling, and trading across different spaces of the metaverse creates a virtual economy in which brands can conduct business. (Newzoo, 2021) In addition to non-fungible tokens, metaverse applications also have limited plots of digital space, or "land," that can be purchased and monetized much like physical land is in the real world. Although the metaverse is virtual, Ball's third key attribute claims it is still rooted in the physical world, (Newzoo, 2021) thus implying that virtual assets in the metaverse have value in the physical world. For example, the currency exchange rate between the virtual world Sandbox and the U.S. dollar is 1 SAND to \$2.88. If a company was to hold an event on land they purchased or sell digital assets on Sandbox to earn 1,000 SAND, they would have a sum of digital currency equal to 2,880 U.S. dollars.

The physical root of the metaverse provides real revenue-driven business opportunities, but also offers tools to revolutionize internal operations. The term "industrial metaverse" has become popular as companies have utilized the metaverse to improve manufacturing, design, and supply chain operations in the physical world. (Burian, 2022) BMW has created a virtual twin of its Regensburg production plant in which global teams collaborate in real-time 3D and has said their method is "revolutionizing planning processes." (Burian, 2022) These collaborations are possible because the metaverse is populated by multiple contributors. As previously mentioned in Tim Sweeny's definition of the metaverse, these contributors are "equal participants" who can simultaneously act as creators and consumers in an environment void of physical limitations.

Matthew Ball's last key attribute is perhaps the most powerful organizational opportunity in the metaverse, the ability to create identity. (Newzoo, 2021) In his description of the identity attribute, Ball speaks through a user lens to describe virtual avatars that represent individual people in creative and imaginative ways. However, this same idea of identity applies to organizations, as they too can build virtual representations of themselves in equally creative and imaginative ways. Over 100,000 global organizations have already begun pioneering brand building in the metaverse, (Goode, 2021) discovering innovative ways to reach new audiences and generate brand value.

Major Players and Financials

Primary Brands

Nike, Inc., The Walt Disney Co., and Samsung Electronics Co. Ltd. are three of the most notable organizations across all industries that have spent significant time and resources building or planning to build their virtual brands in the metaverse. Nike, crowned the world's most valuable apparel brand of 2021, (Marketline, 2022, January 05) recorded a revenue of \$44.5 billion, market cap of \$216.9 billion, and total employee count of 73,300 in 2021. (Marketline, 2022, February 07) This U.S. based organization made a major investment into the metaverse in December of 2021 by acquiring virtual startup company RTFKT to build valuable assets like sneakers and apparel for consumers in the metaverse. (Nike, Inc., 2021) John Donahoe, president and CEO of Nike, Inc. said, "this acquisition is another step that accelerates Nike's digital transformation and allows us to serve athletes and creators at the intersection of sport, creativity, gaming and culture." (Nike, Inc., 2021) This acquisition was not Nike's first involvement in the metaverse. They entered the space in November of 2021, when they launched an immersive experience inspired by their real-life headquarters on Roblox, (Roblox, 2021) a human co-experience application in the metaverse that enables shared experiences amongst 47.3 million daily active users. (Roblox, 2021, November 11) Given the name "Nikeland," the experience allows users to participate in games, collect custom Nike apparel for virtual avatars, and freely explore the Nike-made environment while engaging with other users in the same space. Other brands like Hyundai and Warner Bros. Pictures have utilized the Roblox metaverse platform as well to engage with millions of consumers through creative and immersive game experiences. (Ueland, 2022)

The Walt Disney Co. has also taken its first steps into the metaverse with long-term goals of creating a new paradigm of how audiences experience and engage with their content. (Vena, 2022) The global media giant, headquartered in the U.S., recorded a total revenue of \$67.4 billion, a market cap of \$272 billion, and an employee count of 190,000 employees in 2021. (Marketline, 2022, February 10) CEO Bob Chapek has publicly expressed his interest in bringing Disney to the metaverse, saying it is "the next great storytelling frontier and the perfect place to pursue our strategic pillars of storytelling excellence, innovation, and audience focus." (Vena, 2022) Following up on his remarks, Chapek appointed former Chief Technology Officer of consumer products and interactive media, Michael White, as the Senior Vice President of next-generation storytelling, amongst which his chief duty is "connecting the physical and digital worlds." (Vena, 2022) In December of 2021, Disney received patent approval for their "virtual

world simulator” which uses technology to project 3D animated images into real world spaces to create interactive experiences for guests. This would be a revolutionary development of the metaverse, as individuals would not need to experience the virtual world through a device, rather, the virtual world would be brought into the physical world. (KQ Education Group, 2022) Although this may not fully be implemented into theme parks for years to come, Disney has already started utilizing elements of the metaverse, such as augmented reality, inside their theme parks to deliver unique digital experiences in the physical environment.

Lastly, Samsung Electronics Co. Ltd. has positioned itself to be a leading consumer-facing tech company in the metaverse. The consumer electronics sector of the South Korean based organization collected a total 2021 revenue of \$19.26 billion, (Samsung & Statista, 2021) and the company recorded a global market cap of \$403 billion with an employee base of 98,557 employees. (Marketline, 2022, February 03) Samsung took its first plunge into the metaverse through the Decentraland open application, where it built Samsung 837X, a fully immersive experience featuring quests, NFT prizes, product reveal events and live performances. (Samsung, 2022) Inside the Samsung 837X virtual building are three unique experiences designed for consumers to discover and learn about Samsung’s most important initiatives: sustainability, customization, and connectivity. (Samsung, 2022) Users can go on quests to explore each experience, play games, and collect digital assets in imaginative ways. In addition to its immersive experience in Decentraland, Samsung has included a free NFT with every pre-order of its Galaxy S22 and Tablet S8. (Marketline, 2022, January 05) In fact, it even held the launch event of its Galaxy S22 phone in the Samsung 837X virtual building, showing the brand’s commitment to pushing new strategic frontiers in the metaverse.

Metaverse Industry

By 2026, it is projected that almost a third of global businesses will have products and services available in the metaverse. (Gartner, 2022) The global metaverse market revenue reached 47.69 billion in 2020, (Emergence Research, 2021) and according to financial goliath Morgan Stanley, presents an “\$8.3 trillion opportunity to monetize U.S. consumer spending on an everything from games and music, to apparel, automobiles and real estate.” (Morgan Stanley, 2022) North America accounts for 45.3% of the metaverse global market, (Emergence Research, 2021) where much of the exponential growth it has seen was sparked in October of 2021, when the global media

company Facebook rebranded and renamed itself to Meta. That same month, CEO and founder of Meta, Mark Zuckerberg, announced in the company's third quarter report that their investments in Meta Reality Labs, the metaverse development segment of the company, would reduce the overall 2021 company profits by \$10 billion. (Meta, 2021, October 25) Meta confirmed this profit loss in their fourth quarter and full-year report in February of 2022, meaning that Zuckerberg did in fact invest \$10 billion into developing the metaverse. (Meta, 2022, February 02) While many stakeholders see this as a failure and financial loss because of no immediate returns, the company has made a strong commitment to manage temporary financial losses in preparation for generating immense returns in years to come. The billions of dollars in research and development from leading organizations around the world represents a promising future for the metaverse.

Market Overview

Demographics

Unfortunately, being in the early stages of development comes with its consequences. Although it is in the heights of its technical build, the metaverse has limited accessibility. Some applications that have had major investments from brands and individuals around the world are not yet available to the public, like the Sandbox platform. Also, many of the top metaverse applications are game-oriented (NFTexplained, 2022), resulting in a global market demographic that is skewed towards a gaming consumer audience, mostly young males. In 2021, 56% of metaverse users were male, 42% were female, and 2% were non-binary. (Melcher, 2022) The average user was 27 years old, (Melcher, 2022) however, the metaverse consumer base is largely made up of a younger generation that will inherently grow with the technology and shape its future. The metaverse gaming application Roblox has over 200 million monthly active users, 83% of which are under the age of 25, and 67% of which are under the age of 16. (Dean, 2022) The massive number of young developers and consumers shows the interests younger generations are taking in the metaverse. A study showed that metaverse players are 10% more likely to use Instagram, 18% more likely to use Tik Tok, and 18% more likely to use Snapchat, insights that all point towards the potential for brands to create value amongst a new generation of consumers. (Melcher, 2022)

Psychographics

In a 2021 survey of global internet users, the top three reasons for participating in the metaverse were work possibilities, art and entertainment, and financial investment, with education falling to fourth place by a slim 4% margin. (PC Magazine, 2021) In the same survey, respondents said the three leading benefits they see in the metaverse are overcoming obstacles that prevent us from doing things in the real world, enhancing creativity and imagination, and traveling worlds without physically moving. (Tidio, 2021) These consumer insights reveal that users participate in the metaverse primarily to create, interact, and experience. The main features consumers look for in metaverse applications is customized avatar appearance, content funded by advertisers and sponsors, and ability to create content for other users. (Melcher, 2022) Users also want one more important feature in their metaverse open applications, the ability to socialize. Over half of metaverse game players say they use games to socialize, (Melcher, 2022) and this concept has been embraced by brands like Samsung and Nike that have created open spaces allowing users to freely interact with each other and provided content to drive those interactions.

Consumer Spending

Facilitating social environments for users comes with financial benefits. Users who socialize in metaverse game platforms spend an average \$1.28 more every six months than users who do not socialize. (Melcher, 2022) This may seem insignificant on a small scale, but for a platform like Roblox with over 200 million monthly users, this translates to massive financial gains. Consumer spending in the metaverse on digital assets such as land, NFTs, and crypto currencies has amassed over \$10 billion in market value in 2021. (Metaverserra, 2022) As the metaverse evolves from a game-oriented space to an immersive universe involving all facets of life like education, health, and entertainment, it has the potential to unlock an additional \$5 trillion in consumer spending. (Morgan Stanley, 2022)

Media and Communications Activities

As previously mentioned in the demographics section, the top metaverse applications being game-oriented has limited brand activity and the consumers they reach. Nonetheless, organizations have been capitalizing on the available opportunities primarily in two groundbreaking ways: Building immersive experiences to host events and creating and distributing digital assets. So far in

this report, I have discussed a handful of brands using a combination of these two key activities and will now explore a few more examples of current brand media and communications activities in the metaverse.

The second largest theme park in Hong Kong, Ocean Park, was forced to close its doors for 146 days during the Covid-19 pandemic, resulting in financial loss equivalent to \$4.08 million. (Qin, 2022) Even after re-opening to the public, the theme park saw a steady decline of visitors and recognized the long-term impact the pandemic inflicted upon them. Thus, it refocused its operations to building a virtual leisure resort on the Sandbox metaverse application, where users can explore the virtual theme park and enjoy entertainment and retail. (Qin, 2022) Warner Music Group similarly invested in a metaverse opportunity to combat the decline of physical interaction due to the pandemic by building a virtual music theme park in the Sandbox application where artists will be able to hold virtual concerts for users. (Qin, 2022) The fashion industry has fueled this trend as well, as leading companies like Renovi, Fendi, and Dior have partnered with development company Threedium to prepare virtual assets and a fashion show experience ahead of the first ever metaverse fashion week, taking place on the Decentraland application from March 24-27, 2022. (Marketline, 2022, February 22)

In addition to immersive experiences, brands have developed various non-fungible tokens to create brand value in the metaverse. Whether selling these items to consumers or providing them for free, the branded content can soon be owned and used by consumers all over the metaverse, raising brand awareness in the virtual world and generating financial value. The Coca-Cola Company auctioned its first package of branded NFTs, called the “Friendship Box,” in August of 2021. (Coca-Cola, 2021) The inaugural collection of NFTs reimaged some of the brand’s iconic assets for the metaverse, with President of Global Coca-Cola Trademark, Selman Careaga, saying, “each NFT was created to celebrate elements that are core to the Coca-Cola brand, reinterpreted for a virtual world in new and exciting ways.” (Coca-Cola, 2021) Not only are brands creating and distributing NFTs, but individual influencers are too. World-famous soccer star Luka Modric partnered with the Ethernity NFT development group to create a digital asset collection of art and wearables to auction them to consumers. (Businesswire, 2022) Other sports and entertainment icons like the legendary boxer Muhammad Ali and hip-hop pioneer Nasir Jones have released similar digital asset packages for consumers. (Businesswire, 2022)

Consumer Trends

The success brands have had selling virtual experiences and assets in the metaverse comes with no surprise, as the global e-commerce industry grew by more than 25% from August 2020 to August 2021 and was predicted to finish the year growing by another 16.8%, bringing the 2021 global e-commerce sales worldwide to \$4.921 trillion. (Rijmenam, 2022) The digital retail market is exploding with the advent of social media marketplaces, such as Facebook Marketplace and Instagram Shopping, and the metaverse is no different. This presents a paramount opportunity for brands to follow suit of Nike, Coca-Cola, and others that create virtual assets and trade them in metaverse marketplaces, which share a collective worth of \$10 billion. (Metaverserra, 2022)

A second valuable consumer trend for organizations in the metaverse is co-creation with users. In the metaverse, all users, not just professionals, are designers and creators. Entire platforms like Decentraland and Roblox are owned and created by users, for users. On these open applications, brands can build the virtual world together with their stakeholders through participatory design. (Lee, Lik-Hang & Braud, Tristan & Zhou, Pengyuan & Wang, Lin & Xu, Dianlei & Lin, Zijun & Kumar, Abhishek & Bermejo, Carlos & Hui, Pan, 2021) This creates a new type of stakeholder relationship and molds the brand and the metaverse at large to have inherent cultural diversity, cross-generational contents, and cultural heritage (the preservation of content). (Lee, Lik-Hang & Braud, Tristan & Zhou, Pengyuan & Wang, Lin & Xu, Dianlei & Lin, Zijun & Kumar, Abhishek & Bermejo, Carlos & Hui, Pan, 2021) Jamie Mougan and Elise Alverson of Ogilvy communication agency believe brands in the metaverse can provide consumers value by “collaborating with them, empowering them, becoming patrons, rewarding them, or developing rich 1-to-1 encounters that connect the user to the brand—all while not intruding on the user’s unique and personal experience.” (Alverson & Mougan, 2021)

Issues Affecting the Metaverse

In the native stages of development, authenticity is a fundamental problem affecting the metaverse. At this stage, digital assets are more so luxury than necessity, in which their originality and rarity become a significant factor in their pricing. This leads to a high volume of counterfeit items and disincentivizes content creators, causing significant market distortion. (Lee, Lik-Hang & Braud, Tristan & Zhou, Pengyuan & Wang, Lin & Xu, Dianlei & Lin, Zijun & Kumar,

Abhishek & Bermejo, Carlos & Hui, Pan, 2021) As the technology and its contributors evolve, the concerns of identity theft and asset protection grow. (Newzoo, 2021) In the metaverse marketplace, consumers do not compromise their experience to ensure authenticity of developers in real life, and content creators are not most capable of protecting themselves against copyright infringement. The problem of preserving authenticity in the metaverse calls for a new stakeholder to regulate the ownership issue: Developers. Developers can upkeep the market order and protect digital asset authenticity amongst creators and consumers by following more stringent processes to verify virtual objects in the market and utilizing neutral networks to combat counterfeiting. (Lee, Lik-Hang & Braud, Tristan & Zhou, Pengyuan & Wang, Lin & Xu, Dianlei & Lin, Zijun & Kumar, Abhishek & Bermejo, Carlos & Hui, Pan, 2021) Brands should recognize developers as a key stakeholder for legitimizing brand activity in the metaverse.

An even more prominent issue affecting the metaverse is its accessibility and scale. (Newzoo, 2021) It is not yet interoperable, lacks a mass global currency, and has varying compatible technologies between platforms causing a rift in user accessibility. The metaverse is still in its development stages, with just 50,000 users in virtual worlds outside of block-chain gaming in 2021. (Grayscale, 2021) Much of the investments coming from industry leading companies, such as Meta, are for improving technologies, creating compatible systems, and developing experiences and assets to build the foundations of the metaverse. However, a fear is that the virtual world may not solve the consumer pain-points of millions of people and drive mass adoption like many believe it will. (Morgan Stanley, 2022) As much has yet to unfold with the metaverse, there are still many uncertainties of its not so far off future.

Professional Associations

In the short amount of time the metaverse has been in the public spectacle, a number of professional associations have assembled to protect its integrity and drive its future growth. The first is The Metaverse Association, a collective of global metaverse industry leaders advocating for the innovation and collaboration necessary to accelerate the metaverse industry. (Metaverse Association, 2021) The goal of this association is to improve the public policy environment so that metaverse networks can thrive globally. (Metaverse Association, 2021) The Metaverse Association aims to educate constituencies about how blockchain technology can advance the global digital

marketplace, advocate for regulatory clarity, and coordinate with industry, government, and aligned groups to make meaningful change. (Metaverse Association, 2021)

A second metaverse industry professional association is the VR/AR Association (VRARA). The mission of the VRARA is to “to foster collaboration between solution providers and end-users that accelerates growth, fosters research and education, helps develop industry best practices, connects member organizations and promotes the services of member companies.” (VR/AR Association, 2021) They release monthly research reports on different metaverse technologies, hold training and events, and offer an extensive range of resources from podcasts and webinars to research and education opportunities. (VR/AR Association, 2021) The association is partnered with and sponsored by world leading organizations like Microsoft, Amazon, Sony, and many more, and is also media partners with major publications like Business Insider. (VR/AR Association, 2021)

Major Annual Events

The VR/AR Association holds an annual two-day industry event, formerly known as the VR/AR Global Summit and now called the Immerse Global Summit, that attracts some of the most influential metaverse thought leaders and organizations from around the globe. Industry professional and Forbes contributor Charlie Fink called the event “one of the year's most anticipated conferences. It attracts a broad, international cross-section of thought leaders, enterprise executives, entertainment companies, and developers for an intense two days of panels, demos and networking.” (Immerse Global Summit, 2021) The event is a content-driven immersive technology show, featuring talks, exhibits, and events led by globally leading companies and organizations that share practical and valuable real-use cases from the immersive industry. (Immerse Global Summit, 2021) It covers virtually every focus area of the metaverse, such as blockchain, cloud computing, and brand presence, and has had exhibitionists and speakers from world leading organizations like Disney, Google, Apple, and many more. (Immerse Global Summit, 2021) The next event will be held from December 5-7, 2022, in Miami, Florida.

With a similar name, the Metaverse Summit is another annual industry event that receives worldwide recognition. This event, held in Paris, France from July 16-17, 2022, seeks to discover next-generation technologies shaping the future of reality and gathers builders, entrepreneurs, investors, and experts from all areas of the metaverse to present talks, workshops,

and more. (Metaverse Summit, 2021) The mission and vision statement of the Metaverse Summit reads, “We believe in a metaverse in which technology acts as tools to empower social connectivity. We believe in a decentralized metaverse, where data and works are owned and controlled by the creators themselves. We believe in the pursuit of open knowledge for the greater good.” (Metaverse Summit, 2021) The co-founder and COO of the Sandbox metaverse application is set to speak at the event, along with countless other business and thought leaders in the industry. The Metaverse Summit website provides a plethora of information and resources to educate people about the metaverse and its marvelous future.

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