The Impact of the Metaverse on the Future Development of Enterprises

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Abstract. Since the outbreak of COVID-19, the leeway of people has been restricted, so that the desire of virtual world has been further deepened. With the advance of digital technologies such as blockchain and digital twin, the concept of Metaverse has been mentioned again. Metaverse refers to a 3D virtual space based on the future Internet and characterized by connection, perception and sharing. It presents a collective virtual open space, created by the convergence of virtually enhanced physical and digital reality. It is physically persistent and provides enhanced immersive experiences. This study concludes that the application of the Metaverse can bring a new path to brand promotion and marketing, create new needs of users and help enterprises to achieve cost reduction and benefit increase while there are risks of privacy, property rights and economy. At presents, the Metaverse is still an unripe concept. It needs the development of technology, legal constraints and government supervision to make it be widely used in life.

Keywords: Metaverse; Enterprise influence; Future development.

1. Introduction

Since the outbreak of Corona Virus Disease 2019, the duration and impact of COVID-19 has far exceeded expectations. The strong infectivity of the virus has greatly limited people's leeway. The physical distance between people makes people increasingly yearn for a virtual world that can break this boundary. With the popularization of intelligent terminals, the improvement of infrastructure such as 5G and blockchain, and the rise of devices and applications such as extended reality, the Metaverse has immediately become a hot topic at present. 2021 is generally defined as the first year of the “Metaverse”. Since the game company Roblox wrote this concept into its prospectus in March and listed on the New York Stock Exchange, Internet magnates such as Meta and Microsoft have also announced to venture into the research and development of the Metaverse in succession. Metaverse not only accelerates the digital transformation of existing industries, but also stimulates the development of the emerging industries. With a large amount of capital invested in related industries, it is inevitable to bring about economy bubble. Opinions about Metaverse vary from person to person. One is to actively embrace new concept, believing that the Metaverse represents a new direction for future development; the other is cautious about this immature concept, believing that it is just capital speculation. So how should we understand the concept of Metaverse which is imaginative and futuristic? Through the analysis of strategic layout in the Metaverse from enterprises in different fields, this article will explore the impact of the Metaverse on the future development of the enterprise and put forward relevant development suggestions.

2. Metaverse Background Introduction

2.1 Definition of the Metaverse

The concept of “Metaverse” originated from Neil Stephenson's sci-fi novel Snow Crash in 1992. In the text, it is a virtual digital world parallel to the real world, in which people can use virtual characters to participate in activities. At present, there is no unified definition of the Metaverse. The most representative definition of the “Metaverse” is a virtual space that is parallel to and independent of the real world, and an increasingly real digital virtual world. The definition of the Metaverse in

Gartner is: The Metaverse is a collective virtual open space, created by the convergence of virtually enhanced physical and digital reality. It is physically persistent and provides enhanced immersive experiences [1].

To be precise, the Metaverse is more like the rebirth of a classic concept, which is the materialization of concepts under digital technologies such as extended reality, blockchain, cloud computing, and digital twin. Professor Shen Yang, school of Journalism of Tsinghua University, defines the Metaverse as follows: "Metaverse is a new type of virtual reality integrated Internet application and social form produced by the integration of various digital technologies. It provides immersive experience based on extended reality technology, generates a mirror image of the real world based on digital twin technology, builds an economic system through blockchain technology, closely integrates the virtual world with the real world in the economic system, social system and identity system, and allows each user to produce and edit content."

2.2 Why the Metaverse can Attract Technology Giants to Settle in

Up to now, the Metaverse industry is a blue ocean. At this moment, a large number of enterprises increase their investment in the Metaverse, which undoubtedly has strong strategic significance. No matter which enterprise is desirous to be the first successful pioneer of the Metaverse, it will have the maximum rule making power and market share. Just like Microsoft has an unshakable position on the global PC software development, Google is the biggest winner in the global search field. The latter may have some impact on the dominant enterprises, but it is difficult to shake the established situation.

Bloomberg Intelligence expects the market opportunity for the Metaverse to reach $800 billion by 2024. The Metaverse could ultimately become a multi-trillion dollars market as it transforms our lives. Metaverse has great consumption potential, broad market prospects, and low costs, which may bring higher profits and ROIC in the future. Under the temptation of such great interests, major players represented by leading technology enterprises from the United States and China have entered one after another, and began to actively invest in the layout of the Metaverse related ecology.

3. Benifits that the Metaverse will Bring to Companies

3.1 Brand Culture

Brand culture is the cultural accumulation gradually formed in the operation of the brand, which represents the spiritual symbol such as the brand's values, life attitude and fashion sense, etc. "Father of modern marketing" Philip Kotler once said: "A great brand can arouse people's emotional resonance." An excellent brand not only enable consumers to enjoy the material benefits of goods, but also provide a spiritual satisfaction. Like Gucci's slogan "my good life", it means that your life trend is guided by Gucci in my opinion. This also expresses Gucci's brand mission: born to lead the trend of the times that many people regard Gucci as a beacon of trend. It can be found that shaping brand culture helps to enhance consumers' loyalty to the brand. It is an important brand barrier. From the past to the present, the propaganda of brand cultural has been dominated by advertisement, but it is difficult to impress people only at the visual level. The reproduction of the concept of the Metaverse provides new possibilities for brand propaganda and marketing. In May 2022, Gucci collaborated with Roblox on creating a permanent virtual world called "Gucci Town". In the center of Gucci Town is an open plaza surrounded by mini-game highland, creative corner, craft pavilion, selfie street, cafe and virtual Gucci store. Community members can buy Gucci clothing for their avatars in the store, rest and socialize in the cafe, earn double G gems through games, create unique art works in the creative corner, and learn the brand's history and craftsmanship in the craft pavilion. There is such a sentence on the introduction page of Gucci Town: It is a place to express one's own individuality and connect with like-minded individuals from all over the world. Nicolas Oudinot, Gucci's EVP of new businesses, told The Verge. "The starting point when designing the experience has always been the community. True to this, we envision the future developments as an open dialogue between Gucci and the recurring visitors. Emerging content creators and talents from the Roblox community will be on board, while we will infuse the ecosystem with new ideas and visual stimuli, as our creative messaging is forever in flux, evolving with the kaleidoscopic vision of creative director Alessandro Michele.” [2]. The brand community can create a relaxed and happy atmosphere for brand users. In the community, members can gain knowledge, improve their literacy, and have a strong sense of intimacy and belonging. Frequent interaction among members has established a bond for mutual benefit between brand operators and consumers, enhanced the stickiness of members, and effectively enhanced consumer loyalty. On Gucci's official website, we can see a page called Gucci Stories, which contains design elements, sources of inspiration, Gucci Equilibrium and more. Gucci is trying to put these contents into Gucci Town, allowing users to participate in it from the perspective of the player or bystander, and promote the development of the story together, to understand the various things behind the Gucci, to establish emotional connections and convey brand values and ideas to them. Compared with previous publicity methods such as advertisements, the immersive experience is undoubtedly more deeply rooted in the hearts of the people.

3.2 Broaden the Market

The Metaverse can create new needs of users. The new consumption under the trend of the Metaverse represents the extension of deep digitalization of brands, IP, and products online. Further combining virtual and reality, it becomes the next evolution direction of consumption. For consumers, the difference of fictional character and the diversity of virtual objects will become the label of everyone’s self-awareness in the Internet age. The two elements of “virtual identity” and “social interaction” of the Metaverse have increased the need to pay for themselves in the virtual world. For enterprises, digital products and NFT will become the expansion of brand value and IP value, creating more goods. In December 2021, Nike invested in the acquisition of virtual sneaker and apparel brand RKFKT to expand its influence in the Metaverse. In April 2022, Nike cooperated with RTFKT to launch Nike’s first NFT sneaker called "RTFKT x Nike Dunk Genesis CryptoKicks". The transaction floor price is 3 ETH, equivalent to about 8800 dollars. In the secondary market, the transaction situation is also extremely hot. Only 24 hours, the transaction volume of this series of sneakers rose 481.9% directly, and the rarest style “alien” even sold at a striking price of 150 ETH. A list was released on the blockchain analysis platform Dune, using the data of the Ethereum blockchain to count the best-selling NFT projects of commercial brands so far in 2022. The list shows that the American sports giant Nike ranks first. It topped the list and opened a gap with other brands with sales of up to 184 million US dollars, which was nearly ten times that of the second place and 18 times that of another sports giant Adidas. This is undoubtedly a successful marketing attempt for Nike, achieving high profit at lowest cost. In addition, the Metaverse also solves Nike's long-standing problem. For the first time in this product launch, Nike has achieved a share of each sale in the primary and secondary markets.

3.3 Cost Reduction and Benefit Increase

The Metaverse also helps enterprises achieve the goal of cost reduction and benefit increase. For products, due to the lower marginal costs of the virtual world, product design will be completed and launched in the 3D environment; and according to the popularity and orders online, the offline production and sales will be determined. In addition to lowering the design threshold, users can also have a richer personalized customization experience. For cost control, the metaverse allows enterprises to try new business models and office models, such as organizing marketing activities and online meetings in virtual spaces to reduce the demand for physical facilities and reduce operating costs and administrative expenses. Tilak Mandadi, the chief technology officer of Disney Company, said that the construction of the ‘Metaverse theme park’ would become the next step of the Disney theme park. It is often difficult for Disney Company to build theme parks all around the world. On the one hand, due to high procurement costs and strict construction requirements, it is a higher expenditure compared with most amusement parks. On the other hand, it is affected by local policies, including land cost, cultural environment, governance and other factors. Therefore, there may not be good results in terms of capital investment and returns. In addition, COVID-19 has had a severe impact on Disney, especially the dramatic decline in offline industrial revenue. In order to reduce losses, Disney has unprecedentedly closed its six theme parks in the meantime. Hence in the future if the Disneyland Park is built in the Metaverse, it will not only have a wider audience, but also have a more immersive experience for customers. Besides the cost of construction and maintenance will drop sharply. The content of the Metaverse theme park is more colorful, and it is much easier to transform a park than building a park from scratch, and it will not be affected by climate change.

4. Risks that the Metaverse will Bring to Enterprises

At present, the Metaverse is in launching stages, and the participation of science and technology giants is only a preliminary exploration of the development direction of the Metaverse. Various types of products on the market have not yet entered the mature stage; the industry has not reached a consensus on the concept; extended reality, artificial intelligence and other technologies and equipment is not enough to support the comprehensive application of the Metaverse. Besides there is a lack of basic legal constraints in many aspects, and some places even break away from government supervision. Such a situation is likely to cause hazard.

4.1 Private Issues

Yuhui Jiang concludes that the important prerequisite for constructing the Metaverse is the comprehensive and exhaustive data of people. As an Internet application platform, the Metaverse has the huge power of collecting, storing, and analyzing user data. Therefore, the Metaverse hides serious privacy leakage problem. In the Metaverse space, to achieve a deep immersive experience, the collection scope of personal data needs to be comprehensively upgraded. In addition to the delivery of data such as identity attributes, behavioral tendencies and interpersonal relationships, the Metaverse will directly link the user’s body and even will to obtain biological information, including face, fingerprint, voice print, eye movement and so on. The leakage of this type of data will be irreversible – the account password in the mobile internet era can be changed to prevent losses if it is leaked; How should personal biological information be changed if it is leaked? In February 2022, Meta was sued by Texas attorney general Ken Paxton for suspected illegal collection of facial information. He accused Facebook parent Meta has unlawfully collected biometric data from photos and videos for commercial purposes, without their informed consent. It can be seen that privacy security issues will be part of the Metaverse for a long time, because there are no companies that have designed a strong network security infrastructure for the Metaverse.

4.2 Property Rights Issues

As a collective sharing space, almost everyone can create in the Metaverse. Elements such as virtual scenes, objects, and digital people are likely to be adapted from the corresponding entities in the real world. Such adaptation application across virtual and real borders can easily cause intellectual property disputes such as music, pictures, and copyrights. In June 2021, Roblox, the largest online user -generated game platform in the United States, was sued by the National Music Publisher Association because a large number of creators on the ROBLOX platform illegally used unauthorized songs, including music works from well -known musicians such as Ariana Grande, Ed Sheeran, The Rolling Stones, Imagine Dragons. David Israelite, chairman of the National Music Publisher Association, believes that Roblox has earned hundreds of millions of dollars by requiring users to pay every time they upload music onto the platform — taking advantage of young people’s lack of understanding about copyright — and then they take virtually no action to prevent repeat infringement or alert users to the risks they are taking [3]. In the era of decentralization of the Metaverse, the protection of property right will be more complicated. In the past, property owner only needs to report the infringer to protect the property right. But if in the era of the Metaverse, there will be probably thousands of users in the space using this application function, which means you have to report all of them.

4.3 Economic Issues

By creating new concepts, hyping new outlets, and attracting new investments to further seek high returns, it has become an inertial operation of capital. Many people are attracted by high profits, but ignore the hidden risks behind it. When more capital is invested in the field of virtual economy, the bubble economy is getting bigger and bigger. When it develops to a certain extent, the value of assets will fall rapidly due to poor market expectations. In the second half of 2021, as the concept of the Metaverse swept the world, a trend of "real-estate speculation" also began to rise in the Metaverse. The real estate players of the Metaverse entered the arena and expanded rapidly. At present, a virtual real estate platform mainly consisting of Decentraland, The Sandbox, Voxels, Somnium Space, NFT World and Super World has been formed. In September, the famous rapper Snoop Dogg had his own virtual real estate on the SANDBOX platform. He claimed that he would host private virtual concert, party, art gallery exhibition and other activities there. Affected by celebrity effects, the status around the star virtual real estate has also risen significantly. In November, REPUBLIC Realm, a company specializing in the development of virtual real estate and other digital assets, purchased a property of Sandbox at a price of about $ 4.3 million. Later, real-estate tycoon Zheng Zhigang used five million dollars to purchase the largest digital plot in Sandbox. While enterprises and stars are constantly entering virtual real estate, more and more business scenarios and brand activities have begun to be derived in the Metaverse. In March 2022, Decentraland held the Metaverse fashion week, and many fashion brands including Tommy Hilfiger and Elie Saab appeared. Sotheby's, one of the world's three largest auction houses, also launched an online virtual gallery in Decentraland. However, in less than a year, the popularity of " real-estate speculation" in the Metaverse dropped straight. According to the latest report of research institution We Meta, based on the data from overseas mainstream virtual real estate platforms, the average price of virtual real estate has decreased from about 17,000 dollars per in January this year to about 2,500 dollars per in August, and the weekly trading volume dropped from the peak of one billion dollars in November 2021 to about 157 million dollars in August 2022. On the average number of simultaneous online users, the average number of simultaneous online users in Decentral and was more than 1200 before May this year. Since then, the number has dropped significantly to less than three digits. The decline in the popularity of "real estate speculation" in the Metaverse is expected. There are two main reasons. One is the collapse of global crypto assets, and the virtual property of the Metaverse is closely linked to the crypto market. The second is that virtual real estate is too advanced, and there is still a long period before application. At present, the development of the Metaverse is still in its infancy. Commercial facilities and virtual real estate application scenarios are seriously lacking, and the content experience based on virtual real estate development is poor. The loss of users is an inevitable phenomenon. Only when the concept of Metaverse is more mature and industrialization is realized, can virtual real estate enter a more benign development track.

For ordinary consumers, the High-return and cutting-edge Metaverse projects have become a popular investment area due to the Metaverse's latest, fashion and personalization features. As a result, criminals began to build a Ponzi scheme under the guise of the Metaverse. Many games, real estate, capital disks, etc. were also packaged into the Metaverse projects, and even non-existent items were capitalized to attract the public to participate in the purchase to accumulate money.

5. Suggestion

For technology research and development companies, how to improve the meta-universe experience will be the top priority. The first is the hardware aspect, Musk’s criticism of the Metaverse focused on a lack of compelling use-cases and a disappointing experience for consumers. “Sure. You can put a TV on your nose. I’m not sure that makes you ‘in the Metaverse,’” he said. “I don’t see someone strapping a frigging screen to their face all day and not wanting to ever leave. That seems — no way.” [4]. So how to reduce the weight of VR/AR devices, lessen the dizziness of scene interaction and change perceptio, and enhance perception and tactile feedback in virtual scenes will be an important prerequisite for the Metaverse to be tried by most people. Secondly, privacy data protection has always been one of the most concerned issues in the real world. The amount and richness of personal data collected by the Metaverse will be unprecedented. For consumers or users, how to ensure the security of private data is an important issue. Enterprises must establish a good personal data leakage prevention mechanism in the construction of the Metaverse.

For the ordinary enterprise, there are things companies should do to prepare for the opportunities that the Metaverse presents. Business leaders should first conduct market and technology research to understand current trends and analyze whether these changes have an impact on current work patterns. If it is confirmed that the Metaverse will have a positive impact on the business, the development direction can be considered from the following three aspects: First, how to use the Metaverse to improve their customer experience. The second is by partnering with the Metaverse platform to try to create Metaverse applications. The third is how to use the Metaverse to create new business models and revenue streams.

For the ordinary consumers, facing related investments in the Metaverse should be done with caution. The Metaverse has the ability to be commercialized, and there are many highlights and opportunities. But at present, the Metaverse is full of a lot of public opinion bubble and economy bubble, and there is still a long development path that causes many uncertainties in the market. Therefore, be wary of speculative projects in the Metaverse.

6. Conclusion

In 2021, affected by the epidemic, the Metaverse has rapidly become one of the hottest topics in the world. Many companies have announced the development of the Metaverse projects. By analyzing the actions of enterprises in different fields in the Metaverse, this paper finds that the Metaverse can contribute to promoting brand culture, expanding the market, cost reduction and benefit increasing. However, due to the lack of relevant laws and moral norm, there are still many risks such as privacy leakage, property rights infringement and economy bubble. At present, the Metaverse is in its infancy. There are many application scenarios worth developing, and many areas need to be improved. For research and development enterprises, it is necessary to improve the user experience by reducing the weight of VR/AR devices, lessening dizziness during experience, and enhancing perception and tactile feedback. Privacy leakage is a problem that need to pay attention to. Enterprises must build a strong personal data leakage prevention mechanism to reduce risks. For ordinary enterprises, the impact of current trend on the enterprise should be analyzed before deciding whether to develop the Metaverse project. For ordinary consumers, due to the many uncertainties in the Metaverse market, they should be cautious about Metaverse investment projects.

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