

Metaverse: A Study of Its Impact on Global Business

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ABSTRACT:

The future is here and how! Technology has seeped into our lives changing them for the better and now it continues to gain a strong foothold in various walks of our existence be it entertainment or infotainment. One such altruistic advancement is the Metaverse. Pushed by the pandemic, the digital transformation across economics and industries took about a decade's backward shift. The rise of block chain, NFTs and AI-powered applications and tech tools continue to further fuel the magnification of metaverse from just a virtual reality platform to a space with a rich eco-system and metaverse gateways, platforms and infrastructures, as well as umpteen service providers in place to augment customer experience. Existing concepts like virtual reality and augmented reality form the basis of the metaverse. For instance, imagine virtual simulation games come to life.

I. INTRODUCTION:

The metaverse derives its name from: 'meta' meaning beyond and 'universe'. To put it simply, the metaverse changes the relationship we have with the internet. Rather than us seeking out the internet, for example, by actively taking out our phones and searching for something on Google, the internet will exist all around us

The Metaverse technology essentially treads along the lines of amalgamation of our physical life and its digital twin. It is a reality beyond reality. Composed of augmenting reality, virtual reality, mixed reality and a 3D virtual world crafted to the T, the Metaverse is an advanced and innovative platform for interacting online backed by cloud and real-world data.

Components of Metaverse

Economy

The Metaverse economy is powered by cryptocurrencies, NFTs (Non-Fungible Tokens), and blockchain technology. These assets allow

users to buy, sell, and trade virtual goods and services within the Metaverse.

Interoperability

Another important feature of the metaverse is interoperability. It allows people and businesses to interact in ways not possible in the physical world.

Governance

Because the Metaverse is online and global, no centralized location or jurisdiction can enforce rules and regulations. In other words, enforcement should be done on a case-by-case basis. Due to the global and decentralized nature of the Metaverse, businesses and individuals operating within the Metaverse are not subject to the same regulations as in the physical world.

Identity

The Metaverse provides a variety of ways for users to create and manage digital identities and employee digital identities. Metaverse digital identities do not have the same limitations as real-world identities

Experience

The online universe is a highly aesthetic and visually stimulating space. The interface is clean and easy to use, and the possibilities for exploration are endless, especially when you combine the simulated scenery with a virtual reality headset.

Persistence

The simulated universe is an always-on digital environment that is constantly evolving and expanding. The development process continues even if someone logs out of the metaverse. Persistence is therefore one of the strengths of the metaverse, allowing for richer and more engaging encounters.

Metaverse in Trade

As the country prepares for the fifth phase of industrialization, next-generation technology is critical to helping companies realize their goals and visions. With the introduction of Metaverse, the concept is affecting more than just the gaming and entertainment industry. It also has the potential to change social, economic and political dynamics.

Bringing businesses from different silos of industries under its canopy, Metaverse is predicted to take over in a big way. Currently, as per Gartner Marketing Survey, 35% of consumers Have Never Heard of the Metaverse but as per projections, Garner expects that by 2026, 25% of people will spend at least one hour a day in the Metaverse for work, shopping, education, social media, and entertainment etc.

Since the metaverse is so vast, there are a lot of potential intersections with e-commerce. As the concept of metaverse continues to grow and manifest in different ways, e-commerce will shift and grow with it. People are currently buzzing about the metaverse and the digital future of our society. At this point, there is still quite a bit of confusion about what the metaverse is.

Metaverse in Logistics

Metaverse is a disruptive technology that radically changes business operations in various organizations, including logistics service providers. It provides opportunities for organizations to compare their reality with the new and rapidly changing reality, as well as the ability to collaborate, analyze and react quickly to change

Metaverse reveals a new type of customer interaction that is strongly relevant to the logistics industry. This approach not only creates a more detailed process simulation, but can also encourage the creation of immersive virtual worlds to aid training in warehouses and production facilities. There are programs that create digital twins and design work routines, identify inefficiencies and increase productivity. Warehouse simulation and digital twins can also improve the efficiency of logistics and supply chain operations.

II. LITERATURE REVIEW:

1. ICT (Feb, 2022)-How Can Metaverse Technologies Impact Businesses?

Businesses are looking forward to the opportunities that the virtual world has to offer, where there is no limit to imagination. Business are preparing themselves for a metaverse-dominated future, which could open new markets. According to PwC reports, virtual reality and

augmented realities could bring a USD1.5 trillion boost to the global economy by 2030.

2. Matthew Ball (Jan 13, 2020)-The Metaverse: What It Is, Where to Find it, and Who Will Build It

According to Matthew Ball, a technology expert and venture capitalist, the concept of the metaverse has several characteristics. First, the metaverse is expected to be a continuous experience without pauses and delays, including an unlimited number of users. Second, the metaverse is expected to be an open market, where businesses and individuals would freely engage in activities and generate content and experiences. Third, the metaverse is expected to encompass both the digital and physical worlds and offer an extraordinary “interoperability of data, digital items/assets, content, and so on.”

3. Jie Huang, Pingjin Sun, WeijieZhang(2022)-Analysis of the Future Prospects for the Metaverse

According to Atlantis press 2022 ,Metaverse is a new windfall for the future development of the Internet, and further development of Metaverse needs to be realized from multiple perspectives, such as industrial investment, regulation, industry integration, and technological breakthroughs. The Metaverse is a virtual world that incorporates all aspects of digital technology, including video conferencing, games such as Minecraft or Roblox, cryptocurrency, email, virtual reality, social media, and live streaming.

4. Jeff Wong (January 19,2022)-How Will The Metaverse Impact Businesses In The Consumer Goods Sector?

According to the research by Forbes on how metaverse will impact consumer goods, For consumer goods brands facing a weakening physical market, however, the metaverse can provide a much-needed alternative. For others, it will open doors to additional markets, and there will be other exciting new entrants who will leapfrog straight into virtual goods. It's up to the creators of real and virtual consumer goods to decide where they want to place themselves in this new and burgeoning market.

5. Sudeep Srivastava (February 9, 2023) – How can your business enter Metaverse by Appinventiv

The metaverse is becoming important because it offers a new way for businesses to communicate and collaborate with users from

anywhere in the world virtually. It also supports a whole virtual economy where users can enjoy numerous activities like building a real business. Top brands like Google, Microsoft, and Facebook Inc. have all invested in cloud computing and VR companies to anticipate the metaverse industry's expansion. This is a clear indication that the potential of the metaverse is about to be unleashed in the next few years along with a multitude of opportunities, especially for those who are curious enough to explore the space early.

Research Methodology:

Objectives of study

- To know the current impact of metaverse in global business
- Future of metaverse in global trade & logistics
- Detail understanding of role of metaverse in different types of business
- Negative and positive impact that metaverse may create in global business
- Metaverse expansion of logistics

SOURCES OF DATA

All the data collections sources would be secondary sources. No primary data will be data. Data will be collected from different website, opinions of leaders in industry, articles, research papers, companies working on metaverse.

Analysis of Data:

METAVVERSE IN TRADE

ADVANTAGES OF METAVVERSE IN GLOBAL BUSINESS

Find new ways to engage users

Metaverse is a whole new level of entertainment and immersive experience, and as a business you can take full advantage of it. Being among the first to introduce customers to the metaverse experience will definitely give you an edge and attract attention

Discover opportunities for virtual events

Organizing a conference or live performance where you can participate both in person and virtually is not new. Many people cannot travel to attend a professional conference or lecture, but that is no reason not to learn more. As an alternative to simple Zoom or Google Meet streams, a metaverse conference cannot be just a video in a small window with comments below, but

a full VR experience with proper networking and participation option

Showcase and sell your products

Many brands are already actively using AR to get their customers to try on clothes or glasses, see how new furniture would fit in their room or give them a virtual makeover with a new hairstyle or make-up. The same experiences, but better, are possible in the metaverse.

Introduce innovative forms of advertising

We look forward to Metaverse adopting new approaches to brand storytelling and advertising in general. Telling a story is one of the most powerful ways to increase your brand identity and awareness. Storytelling gradually becomes "storytelling", which means that users are no longer passive listeners, but active participants or even characters who choose and influence events.

Establish better process building and team collaboration

We have all embraced the new reality of online meetings and remote teamwork. Although we were forced, these approaches proved to be just as effective as a face-to-face office environment. Metaverse can be a way to make work processes even more efficient.

Benefit from easier transactions with e-wallets and cryptocurrency

Metaverse and cryptocurrency go together. Even at this early stage of adoption, we can be sure that it will be difficult to enjoy the benefits of the digital world without a crypto wallet. While some entrepreneurs may be confused by the idea, blockchain and cryptocurrency bring more good than bad.

New Opportunities for Branding

The influence of social networks and platforms on the media industry is clearly visible. Brands use social media as a key platform to promote their offerings and engage with their target audience. New branding and marketing platforms empower target audiences to create brand-related content.

Collecting customer feedback in the metaverse

Technologies like VR headsets, which create a more physical connection with users in the metaverse, allow companies to capture valuable data points, said Jordan Edelson, CEO of TradeZing. Live streaming, social engagement,

Web3 platform. designed for millennial and Gen Z marketers.

3D commerce in the metaverse

Metaverse can significantly increase the number of business transactions worldwide because it changes the supply of inventory, which can become infinite, said Robert Clarkson, chief revenue officer of Payoneer, a payment platform that connects businesses with customers. for online payments. As a result, it will also change the way businesses pay, bill and receive goods

CHALLENGES OF METaverse IN GLOBAL BUSINESS

Required of Advanced Digital Technologies

The first item in the list of metaversal disadvantages clearly indicates a requirement for advanced digital technologies. Metaverse offers many new and advanced technologies such as VR headsets, haptics, blockchain and other requirements. However, not all people on this planet have access to advanced technologies.

Privacy and Security Implications

Many of today's digital solutions have been associated with privacy and security issues. The main agenda of criticism of digital solutions is that they collect data from users. Such information can be used for intrusive online advertising and identity theft.

Barrier For Entry – High Cost of VR and AR Gadgets

The Metaverse would depend heavily on high speed internet connection and quality. graphic display, sensors and actuators to record the movement of users. Not to mention omnidirectional VR treadmills, high-quality audio, haptic feedback and cutting-edge computer systems that are more advanced than gaming computers.

Interoperability – Seamless Experiences Across Metaverses

Interoperability, from a programmer's perspective, means creating metaverses using protocols and standards that enable the seamless transfer of information and resources between multiple virtual worlds. Users could easily transfer digital assets, avatars and resources between metaversions without disrupting or changing the overall experience.

METaverse IN LOGISTICS WAREHOUSING

The metaverse can also be used to design efficient and effective facilities. The first step is to create a virtual version of a manufacturing facility, a cargo ship, a warehouse, or distribution centre. In this simulated environment, all the processes and flows can be checked, including during peak loading periods or in times of disruptions.

It can also be used to design efficient and functional spaces. The first step is to create a virtual version of a factory, cargo ship, warehouse or distribution center. In this simulated environment, all processes and flows can be controlled even during load peaks or disturbances.

Based on this test, the best solutions can be incorporated into the design of the physical version. For example, flow can be tested in a warehouse. Spatial modeling can be used to optimize shelves. The location of facilities and the number and placement of personnel can be explored - all without building anything in the physical world. The result is better and more efficient inventory planning.

PACKING

Product packaging online and in-hand is likely to be different, as digital packaging and the way you can present your product to consumers in the digital world has limitless possibilities. Enhance your packaging for the virtual world with interactive visual effects, offering virtual "unboxing experiences" where your consumer can digitally unwrap your product. By developing packaging for Metaverse, you can create an exceptionally unique experience for your consumers.

1. Innovative Brand Perception

Although digitally enhanced packaging is becoming more common, it is still unique. So, by adapting in time to the future of digital packaging, your brand will be seen as an innovative, forward-thinking brand at the forefront of digital technology development.

2. Valuable data

It is also a great advantage of Metaverse. Similar to online shopping, Metaverse allows your brand to track consumer behavior, but at a deeper level. Metaverse seems to offer a lot of flexibility. Brands can test new concepts with selected customers or for a limited time and launch new products or packaging concepts based on consumer feedback. Accurate and detailed information allows marketers and designers to make more informed

choices and potentially adjust packaging in time to individual customer preferences.

INVENTORY

Global supply chains are complex and difficult to understand even for international supply chain professionals. Today, stakeholders, employees, investors and customers demand greater visibility into where raw materials are sourced and which and where components are manufactured and finished. They want transparency about the environmental and side effects of the supply chains they do business with.

The metaverse will improve Supply Chain transparency with 3D images of how manufacturers make, deliver, and market products. Interested parties gain increased visibility into:

- lead times
- real-time shipping costs
- transit times
- delays.

This transparency and visibility increases trust, confidence and efficiency in the supply chain.

TRANSPORT

Increasing urbanization, the transformation of mega-cities, massive social trends, and technological advancements are continuously changing mobility patterns. This pace of change in mobility is likely to increase because of Metaverse and disruptive technologies.

By connecting physical elements related to transportation with virtual elements, Metaverse allows transport planners to reshape the way people move. This concept is known as MetaMobility (Meta mobility), in which smart devices or robots interact with humans to provide a range of mobility services.

With emerging technologies and human acceptance of new transportation modes powered by digital tools, the future of mobility will be automated, more efficient, reliable, and sustainable.

Metaverse transportation solutions may soon be another feature or offering in the industry as a part of delivering a frictionless experience. Key players in the transportation industry can use the Metaverse to take customer journeys and experiences to another level by

- Quickly solving problems related to transportation infrastructure, traffic congestion, and parking difficulties as Metaverse allows to view 3D versions of real-life locations.
- Creating digital twins of the phygital things to assist transportation system planning and management as the virtual element overlaps with the real physical world.

- Optimize transportation operations of multiple modes such as road, rail, taxi, train, bus, air transportation, freight transportation, intermodal routing, and multimodal transportation, all thanks to automation and emerging technologies in the Metaverse.
- Building a more smarter and sustainable transport management system leveraging Metaverse and digital platforms.
- Enabling more rapid, easy-to-use, safe, secure, and cost-effective transportation services to people.

INFORMATION PROCESSING

One of the challenges for logistics organizations is to identify and quickly respond to instability in demand and supply. To optimize resources, companies must rapidly increase or decrease their physical assets, including personnel. Lessons learned from digital simulations and the collaboration of Metaverse experts can be used to design highly customizable distribution networks, warehouses and sorting centers. Companies can make quick and effective decisions to adjust their skills, workforce and other assets based on what Metaverse learns. A digital twin of the logistics ecosystem would enable a remarkable increase in human resources.

This would enable rapid familiarization and training through virtual tours of various nodes in the supply chain ecosystem and to exact similar simulated environments and scenarios that can be used to conduct training programs.

III. CONCLUSION

The Metaverse is a world of possibilities, but it's hard to predict exactly what it will look like. But for some businesses, it can be a golden gateway that allows them to grow and serve their customers five times faster and easier. Logistics could be one of the industries that will benefit the most from the arrival of the metaverse. This new technology helps to optimize processes, eliminate overspending and connect different elements of the supply chain. Therefore, it is justified to say that the metaverse is developing at an unprecedented speed and will soon become an indispensable part, influencing the logistics industry as a whole in the future.

IV. SUGGESTIONS

1. Maximize potential by driving strategy, experimenting and learning, and implementing new concepts and technologies.

2. Test and learn approach to both consumer and business, focus on demand and what motivates users, and commit to "Responsible Metaverse".

3. Understand how to manage the various complications and risks of Metaversus (such as privacy/security, accessibility and sustainable energy use).

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