

REVIEW

Marketing Strategies and Tactics in the Metaverse: A Systematic Literature Review and Future Research Agenda

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Abstract: Marketing has traversed a long path from traditional to digital marketing to metaverse marketing in Industry 4.0. Different marketing scholars and academicians have predicted that the rules of marketing game are going to take a paradigm shift in the era of metaverse marketing. Hence, the primary objective of this literature review is to understand the application of metaverse in marketing or how marketing strategies and tactics can take place in the metaverse. In order to do this review research, 68 research articles have been identified from two prominent databases: Google Scholar and Scopus. Widely used PRISMA protocol has been used for this research paper identification. After selecting and downloading the papers, authors have manually reviewed each. Finally, the application of marketing strategies and tactics suggested by different researchers identified and recorded with Microsoft Excel and then analyzed with an advanced data visualization software called RAWGraph. The findings indicate that marketing strategies and tactics in the metaverse can be categorized into six (6) major categories. These are (1) segmentation, targeting, and positioning, (2) 4Ps, (3) branding, (4) customer relationship marketing and partner relationship marketing, (5) competitive strategies, and (6) marketing metrics and automation. The contributions of this study are as follows: (a) it developed a timeline map demonstrating the evolution of marketing technology over time and (b) it synthesized existing literature and presented how marketing strategies and tactics can be applied in the metaverse or immersive world.

Keywords: metaverse marketing, marketing strategies, digital marketing, influencer marketing, virtual marketing, metaverse consumer behavior, systematic literature review (SLR)

1. Introduction

There is a very popular question roaming around among the majority of scientists, business professionals, and even politicians what will be the next technological revolution and how it will affect mankind in every aspect. Metaverse is one of the strong candidates to be the answer to this question as it has all the potential to be the next big thing that shapes both our personal and professional landscape by offering immersive experiences with innovative technology integration [1, 2]. Metaverse in interconnection is linked to a virtual environment that combines the physical and the digital space [3]. It provides the ability for users to interact in real time with the computer-generated surroundings as well as the other users [4]. It includes virtually every form of immersive experience: virtual reality (VR), augmented reality (AR), and more [5, 6]. After the announcement of Facebook, a renowned tech giant, in 2021 that the metaverse would offer a digital revolution and even renamed the organization as Meta [7]. Hence, we can say with conviction that

metaverse is the going to be a difference-maker in the next decades or so.

Marketing in the metaverse is stronger and more immersive, using interactive, immersive experiences that truly grab viewers' attention [8, 9]. Instead, brands can create virtual environments or even events that allow consumers to interact rather than just passively consume material [10]. It nurtures individualized and powerful experiences that reinforce brand loyalty [11]. Tech-savvy users can be primed for creative advertising in the form of virtual product trials or gamified campaigns [12]. The metaverse transcends the limits of the region and enables worldwide engagement, with the exposure of the brand [13]. Therefore, there is extensive user data that can be leveraged for data-informed marketing tactics [14]. The metaverse is a trend that, when adopted, allows companies to stay at the top of the digital wave, gain new audiences, and build robust, lasting marketing campaigns [15].

Given its role in changing how consumers engage and how traditional advertising platforms are structured, marketing in the metaverse is important [2]. The industry is well aware of the metaverse's potential, but very little research is done on how this immersive technology can be leveraged for improved marketing. It reveals that there exists a clear research gap. To fill this research gap, this study accomplishes this through systematic literature review

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(SLR) that identifies, analyses, and draws out distinct lessons from well-established practices, as well as from novel, unique approaches to identify new opportunities for innovation [16]. Doing so helps to set a foundation for the marketing techniques that can develop in this unique, immersive landscape [17].

A study conducted by [18] further corroborates that with businesses jumping into this nascent-staged digital horizon, it is important to understand what marketing strategies need to be optimized in this immersive environment. Since in the marketing literature the authors find a clear research gap related to the strategies and tactical applications of marketing in the metaverse environment; therefore, this study has taken steps to fulfill this gap and contribute to the literature by determining the marketing strategies and application in the metaverse. Therefore, the study proposes the following objectives:

RO1: To critically analyze and synthesize existing literature to determine marketing strategies and tactical applications in the metaverse.

RO2: To suggest future research agenda on the application of metaverse in marketing.

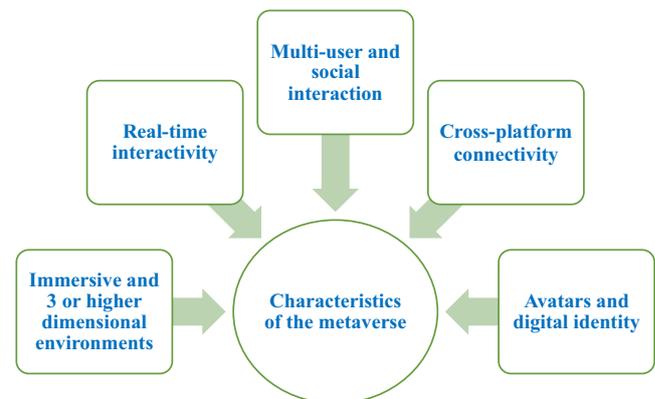
2. Literature Review

2.1. Defining digital marketing and the metaverse

Digital Marketing: Digital marketing refers to the strategic use of digital technology to create channels that facilitate the connection between organizations and potential consumers [19]. It refers to the strategic promotion of products, services, and businesses using a range of digital platforms such as social media marketing [20], search engine optimization (SEO) [8], email marketing, pay-per-click, content marketing, mobile marketing, and web analytics. On the other hand, according to [1], digital marketing is not just limited to traditional online marketing but involves a comprehensive integration of smart technologies such as artificial intelligence (AI), VR [21], AR, internet of things (IoT) [22], blockchain technology [23], decentralized finance (DeFi) [24], NFTs [25], robotics [26], cloud computing and so on [27,28]. The rise of social media has significantly transformed marketing by creating opportunities for businesses to communicate with millions of consumers. Recent studies outlined by [29] suggest that platforms like Facebook, which have over one billion users early on, along with YouTube, Instagram, and blogs, are widely used to share information about products and services.

Metaverse: Science fiction writer Neal Stephenson introduced the concept in his 1992 *Snow Crash*, where he portrayed a virtual world existing alongside the real one, with each real person having a digital counterpart [30]. The term "metaverse" has many interpretations for individuals and organizations due to its incomplete development and ongoing evolution [8]. Different experts have different opinions regarding the concept of metaverse; Recent studies outlined by [9] suggest that the term "metaverse" describes a multi-user, immersive, permanent, three-dimensional virtual environment that crosses many digital platforms and connects with the real world, allowing individuals to interact in real time while shopping, working, playing, and hanging out. Reference [31] argues that the metaverse is a gigantic platform in the virtual landscape where the real and virtual worlds meet. It becomes possible to communicate with many digital platforms to each other, resulting in a dynamic 3D environment that helps to smooth identities and user experience. According to [32], the metaverse is the immersive evolution of the internet, which will be a revolutionary change in the future world. It is a virtual platform that allows users to engage in real-time interaction through the use of extended reality (XR) technology, including AR, 3D graphics, mixed reality, and VR, which is impossible in the

Figure 1
Characteristics of the metaverse



real world. According to [33], the metaverse is a high-tech 3D world where people may engage with one another and interact with brands from any virtual space worldwide. Reference [31] mentioned that the "metaverse" is a future internet with 3D that can be shared and linked to a real virtual world. A metaverse is the capacity to move through time and space using technology like computers, android devices, VR glasses [34], and 3D [20] user interfaces. Reference [35] defined metaverse as "an immersive three-dimensional virtual world in which people interact as avatars with each other and with software agents, using the metaphor of the real world but without its physical limitations," which is further supported by the study of [36].

After careful investigation of diversified definition of the metaverse from different scholars and researchers; the authors in this study have identified multiple characteristics of the metaverse which are obligatory and included in the following Figure 1.

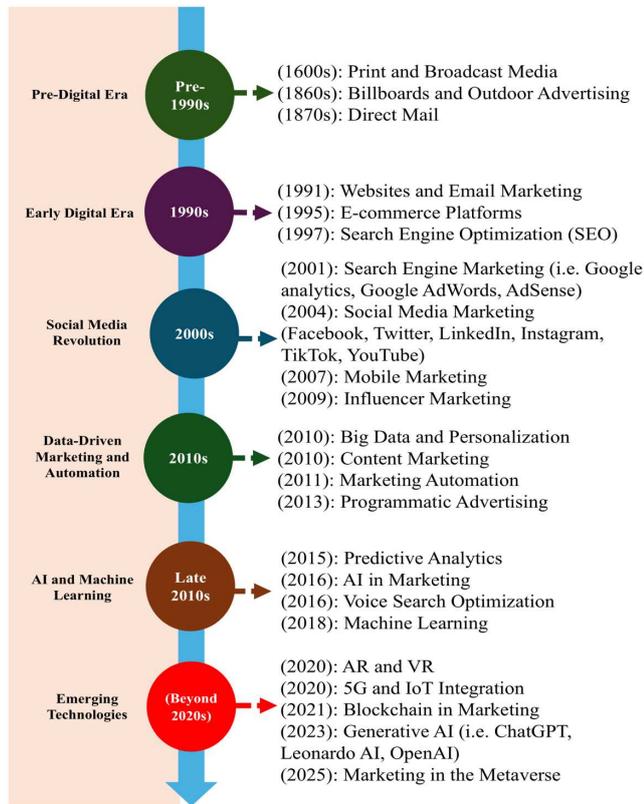
[11] contend that in a metaverse people can do everyday activities through virtual worlds that are fully engaging and 3D. This creates new opportunities worldwide where people can easily communicate, do business, and have enjoyment. This is where individuals can move between work and social activities, utilizing devices such as MR/VR headsets and smart glasses that support immersive technologies [36]. In 2014, major companies like Sony, Samsung, and Google introduced VR headsets, including the affordable Google Cardboard. In 2017, IKEA's Place app enabled users to share content, and Apple incorporated LiDAR into iPhone for AR in 2020. In 2021, Facebook rebranded as Meta, emphasizing its focus on the metaverse [37].

2.2. The evolving landscape of marketing technology

The following Figure 2 encapsulates the evolution of a different technology in marketing which clearly demonstrates that format marketing started its journey back in fifteenth century with the discovery of print media and the future of marketing is expected to be in the immersive metaverse.

Marketing technology evolution has come a long way over the decades. Traditional marketing: The pre-digital era (the 1600s–1990s) was mostly mass media oriented with the traditional forms of print and broadcast media (1600) as well to an extent billboards (1860) and direct mail (1870) for broad audience reach [38]. According to [39], in the early digital era (the 1990s–2000s), technologies like websites and email marketing (1991), e-commerce (i.e., Amazon in 1997), and SEO (1997) evolved. With the introduction of SEO, content marketing gets a new dimension. In

Figure 2
Marketing technology evolution overtime



Reference [40], the fundamental of SEO stands on keyword research, which helps to position the content on top of search engines such as Google, Yahoo, Baidu, and so on. Keywords shitter, Moz, and SEM Rush are some of the most used tools to perform keyword research. Reference [41] suggested that the social media revolution (2000s-2010s) drove the rise of platforms such as Facebook (2004), LinkedIn (2003), YouTube (2005), TikTok (2017), Twitter (2006), and Instagram (2010) [42]. Moreover, in 2001, search engine marketing (SEM) was introduced, which opened new doors of opportunities for content creators. According to [43], those who have a good grab on Google Analytics, Google AdWords, and AdSense had a bunch of learning opportunities followed by mobile marketing (2007) and influencer marketing (2009). Reference [44] mentioned that the data-driven marketing practices (evolved during the 2010s) were highlighted by big data personalization (2010), content marketing (2010), marketing automation (2011), and programmatic advertising (2013). This is the time when data-driven personalization started to make a mark through tailored content services in B2B marketing by analyzing unique preferences, behaviors, and characteristics of the customers [45]. Reference [43] claimed that the continued growth of AI and machine learning, with tools that use predictive analytics (e.g., chatbots, SAP, and predictive analytics) has driven customer engagement into the late 2010s. In this timeframe, technology like predictive analysis (2015), AI (2016), voice search optimization (2016), and machine learning (2018) evolved to increase the effectiveness of marketing activities [46]. Reference [7] stated that emerging technologies in the 2010s: AR and VR [10], 5G and IoT (2020) blockchain (2021), generative AI (i.e., Chat GPT, Leonardo AI, OpenAI), and metaverse (2025) [47] change the dynamicity of overall marketing applications. For example, blockchain offers transparency and security, while generative AI tools become instrumental for content creation and more personalized marketing [48]. Reference [22] mentioned that through

the integration of marketing in the metaverse, brands have the opportunity to interact with their customers in the virtual world. This will open up new avenues for engagement, virtual commerce, and experiential marketing [49], blending AR, VR, and AI [50] in highly interactive ways.

3. Methodology

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, as depicted in Figure 3, is used to identify the literature for conducting this literature review analysis. PRISMA widely accepted, recommended, and used research protocol for conducting SLRs [51–53].

Data source selection and search strategy used: The authors have used two prominent data sources, namely, Google Scholar and Scopus, for identifying literature. Scopus is considered since it covers a wide range of publications, and this database is widely used for conducting similar systematic reviews by different researchers. On the other hand, the Google Scholar database is used, although it indexes both good quality papers and poor-quality papers because it is completely free. Furthermore, this database offers flexibility in advanced searching opportunity.

Although the preliminary search for identifying research papers started in October 2024, the final refined search for literature on these two databases was conducted on February 25, 2025. The search was started with the basic search string composed of “Metaverse” AND “Marketing”. However, all co-authors individually compiled a group of keywords, finally applying the inter-rater agreement technique (over 90%), the keyword lists of all co-authors were compared, and finally reached an agreement to include (“Metaverse” OR “Virtual-World” OR “Virtual Reality” OR “Augmented Reality” OR “Immersive Technology”) AND (“Marketing Strategies” OR “Marketing Tactics” OR “Consumer Behavior” OR “Branding” OR “Customer Relationship”).

This search string has produced 673 articles in the Google Scholar Database and 336 articles in the Scopus database, resulting in the total article number is 1009 where 167 records are found to be duplicate; hence, these 167 records were removed before screening. Finally, 842 records were considered for screening.

Screening, inclusion, and exclusion criteria: In this phase, the subject area is limited to “Business, Management and Accounting” and Language is Set to English only; these filtering criteria result in the exclusion of 581 records. For retrieving literature that is best pertinent to our research objectives, the authors have set the following inclusion and exclusion criteria for this research.

1) Inclusion criteria.

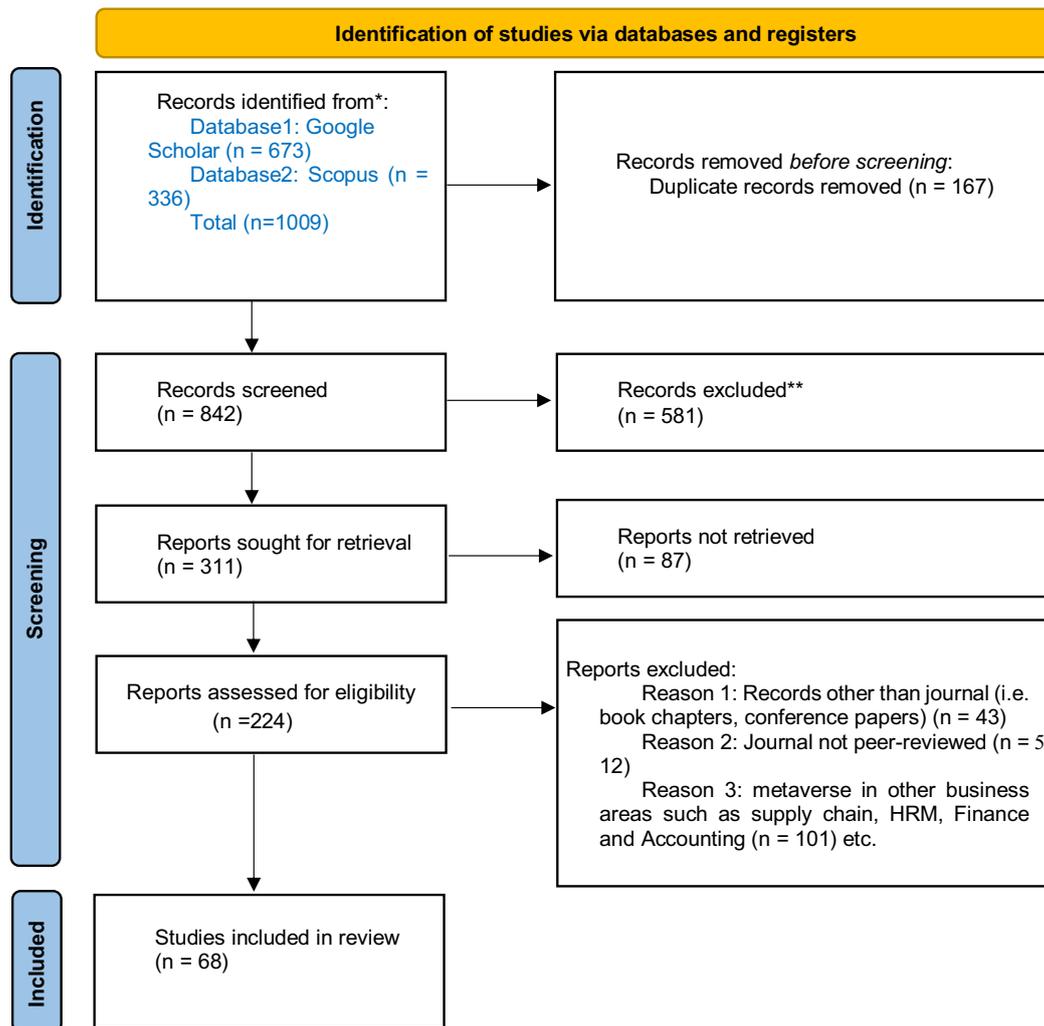
- a) Only peer-reviewed journals will be included.
- b) Articles written in English language will be included.
- c) Research that deals with the marketing strategies and tactics in
- d) the metaverse will be included.

2) Exclusion criteria.

- a) Non-peer-reviewed journals and books and conference papers will be excluded
- b) Articles written in a language other than English will be excluded
- c) Articles that address metaverse strategies and tactics in business areas other than marketing such as supply chain, finance, accounting, and human resource management will be excluded

Subsequently, title of the 311 reports have been assessed; 87 reports are not found to be related to the scope of our research. Later on, among 224 records, 156 records were not included in the

Figure 3
PRISMA protocol



study for three reasons: (1) 43 records were eliminated since they were not journal articles rather these were book chapters and conference papers, (2) 12 records were excluded since these were not peer-reviewed journals, and (3) 101 research articles discussed the metaverse strategies and tactics in business areas other than marketing such as supply-chain, HRM, accounting and finance. Hence, finally, this study included 64 papers in its analysis.

4. Analysis, Findings, and Discussions

Table 1 shows different major themes addressed by the different research paper. However, a significant point to be clarified here is that although each paper, in reality, addressed different themes, the authors classified each paper into one and only one group to make this list exhaustive.

Table 1
Major theme addressed within the papers

Theme	Sub theme	Paper count	Citation
Strategy	Segmentation, targeting, Positioning (STP) strategy, Branding strategy, Communication strategy, Product strategy,	16	[1, 8–15, 20, 32, 37,54–57]

(Continued)

Table 1
(Continued)

Theme	Sub theme	Paper count	Citation
Customer	Customer experience, Customer trust, Customer behavior, Customer perception, Customer satisfaction	18	[2, 16–18, 36, 36, 58–62, 62–68]
Marketing tactics	Promotion, Supply chain, Value creation, Pricing, Sustainability	17	[3, 69–75, 56, 33, 34, 76–81]
Immerging technologies	VR, AR, 3D Blockchain, Digital twin, Mixed reality, Avatars	14	[4–6, 24, 25, 82–89]
B2B	Customer experience, Customer intention	3	[90–92]
Total		68	

4.1. The taxonomy and the components of the metaverse

4.1.1. The metaverse taxonomy

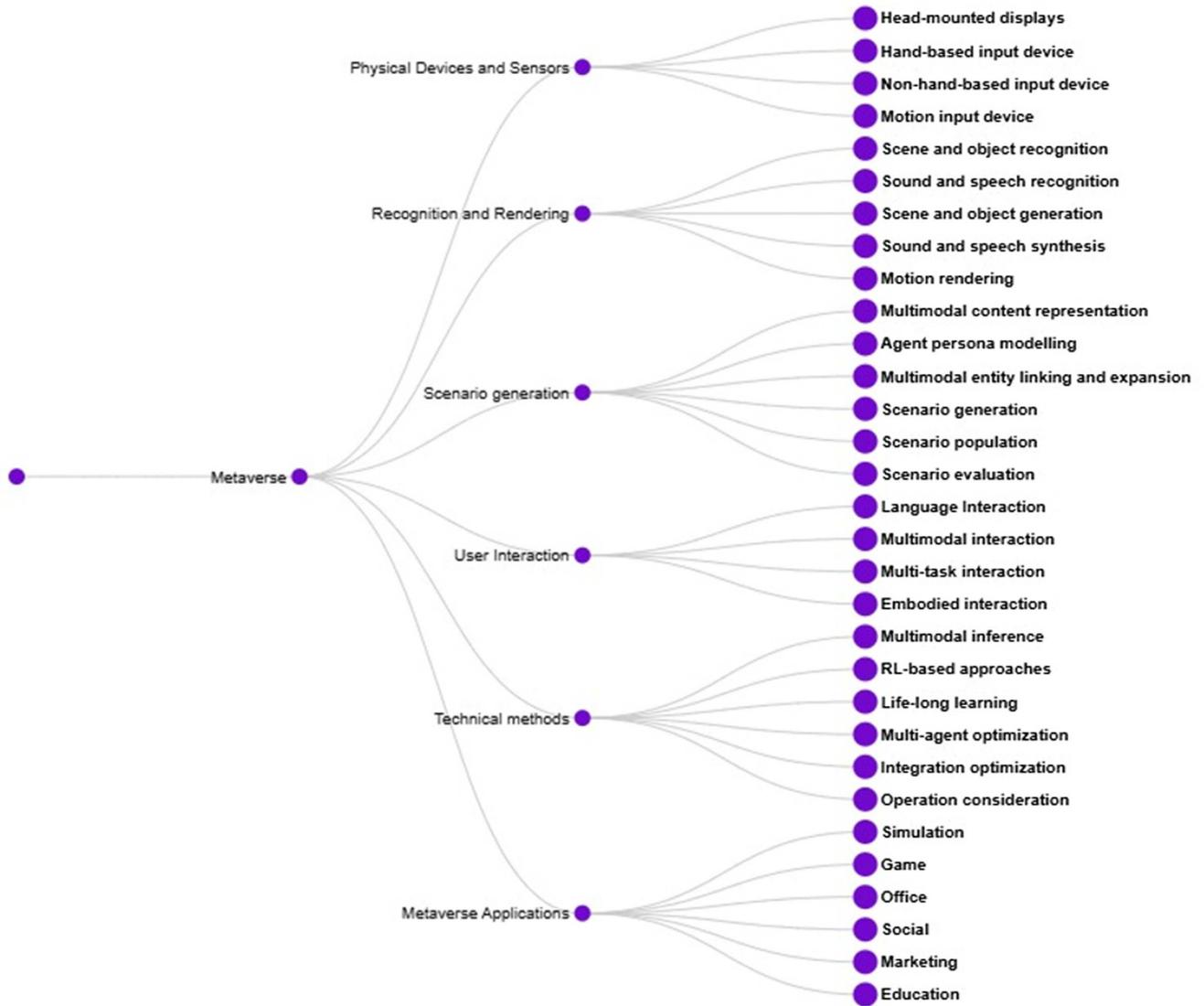
As per the metaverse taxonomy designed by [13] shown in Figure 4, the metaverse consists of the below-mentioned components:

- 1) **Hardware components (physical devices and sensors):** Hardware in the metaverse plays an important role in immersive experience and limiting technical barriers. The essential hardware of the metaverse is Head-Mounted Display (HMD), which shows an image through a display and plays the sound through the speaker. According to [93], it is the basic input tool of the metaverse and is divided into non-see-through HMDs, optical-see-through HMDs, and video-see-through HMDs, which was further supported by [13]. The Second hardware component is a hand-based input device that helps create detailed user data modeling by predicting how the user uses a mobile phone. The third one is non-hand-based input devices such as eye tracking technology, overlaying displays on arms, and voice input [94]. Finally, the last thing is a motion input device that provides a predetermined experience and offers responsive feedback based on user actions [13].
- 2) **Recognition and rendering:** Cognitive illusions are also crucial in enhancing users’ experience in both physical and perceived realities [95]. Recognition and rendering include five **components**: a) Scene and object recognition focuses on understanding the current scene’s state, its components, and configurations, whereas scene graphs are useful in enhancing the explainability of AI-driven marketing tools. These methods like MONET and world models are valuable for real-time marketing applications [13]. b) Sound and speech recognition helps users to communicate directly with other avatars, issue instructions to Non-Player Characters, and facilitate more personalized interactions. c) In scene and object generation, avatars such as celebrities or family members are created in human forms to allow users to

interact with virtual representations of real-world items. d) Sound and speech synthesis creates a sound in the virtual field to give a feeling of personalization [13]. The last thing is motion rendering, which captures asymmetric dependencies and context patterns between objects in real-time multi-party 3D motion [96, 97].

- 3) **Contents:** As a fundamental component in the metaverse, content provides an immersive experience through well-organized stories and user-created events. Contents can be generated in a paradigm shift method and a method to reuse existing content. Content includes some **components** such as multimodal content representation, agent persona modeling (e.g. Persona chat, Personal dialogue), multimodal entity linking and expansion (through link prediction, nonlinear relationships, relationship classification methods, and joint inference such as variation inference, various modalities, ontology, emotion, and knowledge) [98–100], scenario generation, scenario population, and scenario evaluation.
- 4) **User interaction:** Ensuring basic interaction is the most important condition for increasing immersion in the metaverse. It refers to how users engage with the digital environment, **particularly** in the metaverse. It encompasses some approaches and technologies that facilitate the interaction between the user and the virtual system. These include language interaction, multi-modal interaction, multitask interaction (e.g. visual QA), and embodied interaction (e.g., embedded QA and visual language navigation) [13].
- 5) **Metaverse implementation:** The metaverse implementation process can be divided into four phases including a design phase, a model-training phase, an operation phase, and an evaluation phase [13]. The implementation process also encompasses some methods for metaverse training models such as multi-modal inference (e.g. Bidirectional Encoder Representations from Transformers (BERT), GPT-3, Video BERT) [101, 102], Reinforcement Learning (RL)-based approaches (e.g. multi-agent RL, imagination-augmented RL, and language grounded RL), life-long learning, multi-agent optimization, integration

Figure 4
Metaverse taxonomy (Source: Park and Kim [13])



optimization (e.g. imagination-augmented agents, ZEPETO) [103], and operation consideration (e.g. Meta RL, GRAPH RL, Planning RL) [13].

- 6) **Metaverse applications:** Though metaverse is serviced in various applications, games and office applications are the most popular domains. Metaverse can be simulations (IQUADV1, which simulates **realistic** environments of indoor scenes) [104], games (e.g. INREX-VR, an immersive neurorehabilitation system using VR) [105], office (Branch, a game element offering virtual currency, and Team flow, file sharing in conjunction) [13], marketing (e.g. AR and VR technology adoption), and education (problem-based learning method).

4.1.2. Enabling technologies and components

AR, VR, MR, and XR: Metaverse technologies such as AR, VR, MR, and XR provide immersive experiences [11]. Reference [21] mentioned that AR shows real-time text, audio, video, and virtual objects. AI, AR software, processing power, lenses, and sensors are the five components of AR. According to [83], AI is employed

for speech prompts and information processing, while AR software is customizable. Recent studies outlined by [59] suggested that AR needs processing power and optics to view objects. Sensors synchronize the physical and digital worlds by analyzing camera data [106]. Reviewing the results of the case study, [88] conclude that VR is a computer-generated 3D environment that simulates reality and enables human interaction. To see a VR environment, users use VR helmets or headsets. Three primary VR systems are nonimmersive, semi-immersive, and completely immersive [10]. MR integrates VR and AR, enabling real-time interaction between actual and digital things. VR and AR use less computing power.

Artificial intelligence: AI is one of the main things that makes the metaverse possible. It changes how people communicate with virtual worlds by using computer vision and natural language processing (NLP) [107]. According to [66], computer vision is the study of analyzing visual data, while NLP helps people understand words better. In these areas, machine-learning algorithms simplify decision-making, which let AI handle data, find trends, and make predictions on its own [2]. AI makes 3D pictures, animations, and smart contracts, which make it possible for models and virtual

trades to look and feel real. Reference [10] underscored that it also makes drawing, finding objects, and controlling cybersickness better. AI-generated data also encourage new ideas by adding new situations that make virtual experiences more varied, accurate, and flexible [108].

Blockchain, NFTs, and cryptocurrencies: The metaverse (as a concept) depends on blockchain, NFTs, and cryptocurrencies: Blockchain, NFTs, and Cryptocurrencies are the underlying technologies that make it possible for the metaverse to exist in a decentralized manner and provide transparency; source mapping similar to Decentralized Autonomous Organizations but with different means [22, 109]. According to [110], this relationship is toxic, and the blockchain was invented to solve this problem protect digital assets and create a virtual decentralized environment. Cryptocurrencies are mined and traded, and meanwhile, they can be used for actual/real-world or virtual (metaverse) purchases [10]. Reference [23] states that by allowing digital assets to be easily tradable and unique in the form of unchangeable proven ownership, NFTs are blockchain-based tokens. The growth of the metaverse with these NFTs benefits the system as a digital economy, and blockchain makes everything good by eliminating centralized decisions, viruses, and hacking [63].

3D reconstruction: Reference [10] says that 3D reconstruction technology is needed to make the metaverse more real. According to [111], with the help of 3D models, the metaverse can be made real by converting real things that clearly show their shape and aspect. Through using 3D modeling and reconstruction methods, the metaverse makes 3D samples of specific products or processes [88]. Reference [18] argued that the world market for 3D reconstruction technology will double by \$2 billion by 2028.

Internet of Things and 5G technology: In the metaverse, the IoT and 5G technology make connections with the real worlds and the virtual worlds together so that people can easily use data and interact with each other [86]. According to [54], different IoT devices that are used in the metaverse also like AR glasses, haptic devices, and motion sensors can be used instead of motion-only interfaces. Reference [112] argued that through IoT devices people easily connect with them naturally by touch and movement. These tools also make it easier to communicate with others and use behavioral insight in the decision-making process, but it makes users more worried about security and accessibility concerns [37]. Reference [56] says that 5G technology also plays a crucial role in the metaverse. The metaverse is required to provide security, transfer, and low latency that can be ensured by a 5G network.

4.2. The intersection of the metaverse and digital marketing

According to [83], studies have defined the metaverse as a new mixed reality (MR) ecosystem, the repetition of the internet that uses blockchain technology, digital assets, and avatars within an environment where users can interact in the physical and virtual environments perfectly. Mark Zuckerberg, the co-founder, and CEO of Facebook, envisioned the metaverse as a fully immersive mixed and augmented reality ecosystem that could allow organizations to enhance relationships with customers and offer unprecedented levels of customer engagement in an XR environment [113]. McKinsey's research highlights the metaverse's marketing potential, noting that virtual product sales through direct-to-avatar transactions represent a \$54 billion market, which showcases significant opportunities for brands to experiment with new products and services in innovative ways within the virtual space [32]. To capture the immersive experience, organizations started reviewing their

long-term business strategies to identify how their business models and brands can function and thrive within the metaverse. For instance, Gucci, Nike, and McDonald's have explored the metaverse with successful initiatives on platforms like Roblox, demonstrating its potential for customer engagement and marketing. Gucci's virtual "Gucci garden" attracted 20 million visitors, with a digital bag selling for \$4115, even more, interesting from a marketer's perspective is that the real item within the Gucci store retails for \$3400 [83]. Nike created a virtual replica of its headquarters on Roblox, allowing users to interact with virtual products, and enhancing engagement with new and existing customers (Oliver, 2023). McDonald's filled trademark for virtual assets, enabling customers to order virtual food in the metaverse and receive it via home delivery. The efforts highlight the evolving metaverse's potential to transform product and marketing strategies. Additionally, virtual events in the metaverse, enhanced by avatars and 3D options, allow remote consumers to engage as if physically present. Brand co-creation is also elevated, enabling consumers to co-design products based on their preferences. This concept was exemplified by a recent non-fungible token (NFT) project from Prada and Adidas, where fans contributed artwork to create a large-scale digital piece [32]. Figure 5 encapsulates marketing strategies and tactics, and tools are used in the metaverse.

4.2.1. Segmentation, Targeting, and Positioning (STP) in the metaverse

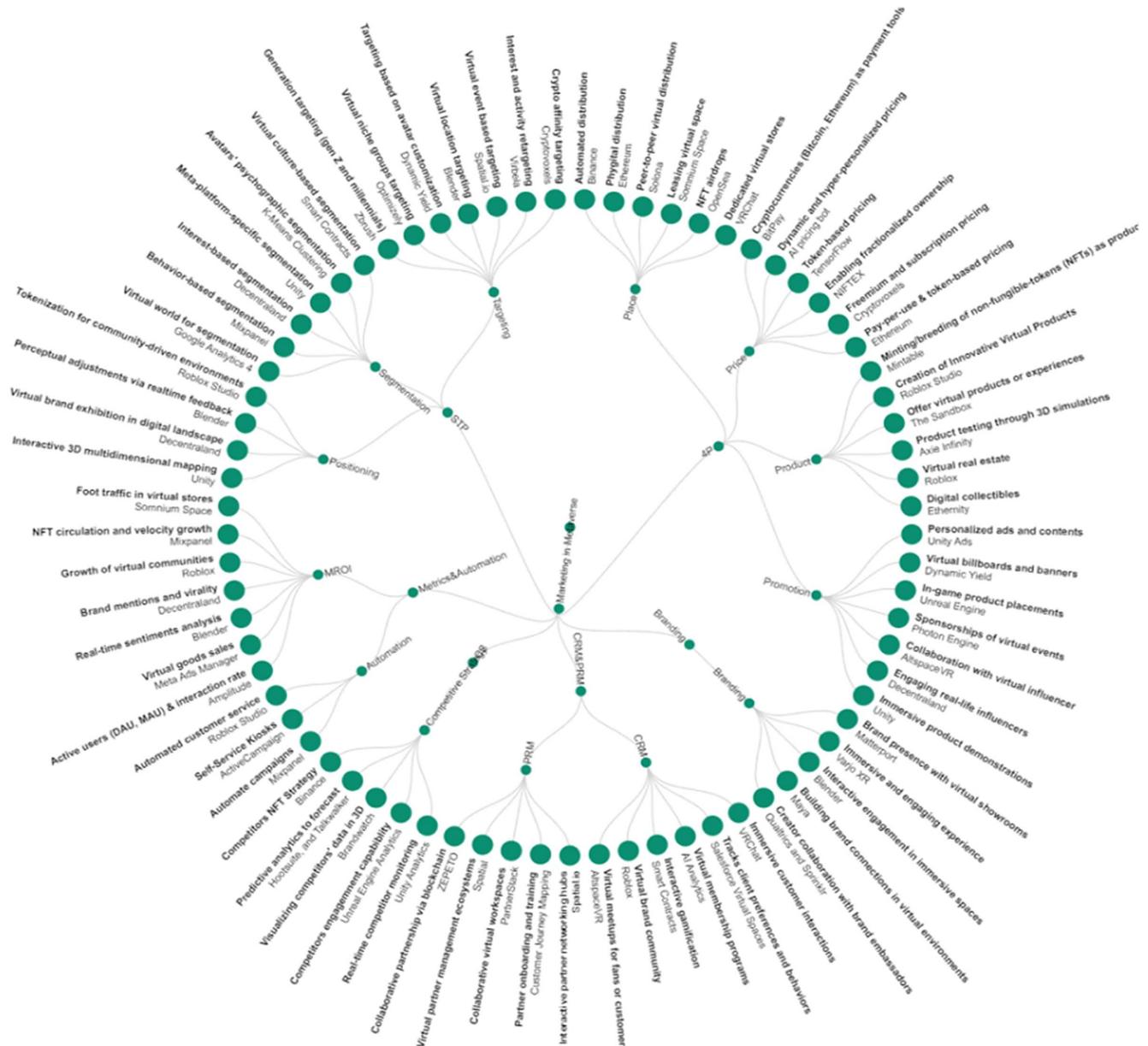
Segmentation: The use of the metaverse in segmentation, targeting, and positioning (STP) may profoundly alter digital marketing strategies by fostering immersive brand experiences and augmenting consumer engagement [69]. According to [114], the metaverse facilitates companies in collecting comprehensive data on user behaviors, preferences, and interactions inside virtual environments by utilizing analytics tools like Google Analytics 4. Moreover, behavior-based segmentation assists in the identification of users' patterns to understand their behavior in a better way. To do so, Mix-panel can be used as it particularly tracks user interaction in virtual environments such as their purchase history, participation in events, and social interaction as well [115]. This enables the opportunity to design a tailored segmentation strategy for the users [13].

According to [16], interest-based segmentation is a good example where users involved in virtual events or interacting with certain companies might be categorized according to their interests, such as gaming, fashion, or technology further supported by [116]. Reference [27] stated that data platforms like Decentraland can be used to create internet-based segmentation for users such as gamers, collectors, or virtual shoppers, helping brands target more precisely, which is further supported by the study of [83]. Furthermore, metaverse assists in creating seasonal virtual events using platforms like Unity, which help to attract those customers who have seasonal interests in specific programs or holidays.

In addition, with personalized avatar creation using K-means clustering, marketers can segment users based on avatar customization choices and offer customized products that unite with users' virtual persona. Culture-based segmentation is another effective way of segmentation that helps users satisfy their desire to have virtual citizenship in different metaverse countries. Through metaverse tools like Smart Contracts, tailored experiences can be offered by creating a completely new identity for the users in the metaverse world.

Targeting: The metaverse enables companies to target certain user demographics via tailored and immersive experiences [73]. Reference [54] stated that metaverse is relatively a new technology particularly that's why Gen Zs and Millennials are more interested as

Figure 5
Marketing strategies and tactics and tools in the metaverse



they are more tech-savvy, appeal to new technologies, and have better adoption capabilities further supported by [10]. Tools like Zbrush lend an important hand to target specific generations (e.g., Gen Z and millennials) by creating appealing avatars with the integration of digital assets [73].

According to [3], metaverse also enables the opportunity to target niche groups more precisely as tools like Optimizely create great advantages for brands to test and design campaigns for virtual communities in a customized manner such as creators, developers, or specific gaming audience. By analyzing the customization of avatars, targeting can be personalized by using tools like Dynamic Yield [117]. Reference [3] highlighted that Dynamic Yield contributes to the operation such as customized marketing messages, which make sure the users get more personalized products and offerings based on their virtual avatar. Tools like Blender assist by providing virtual location-based information that helps to precisely target customers based on their location and design

localized advertising for them [118]. Reference [119] argued that in the metaverse dimension targeting can be done by monitoring the footprints of the users who attends different virtual events by utilizing the tools like Spatial.io, which create doors of opportunities for brands to target-specific interest groups in real-time scenario.

Reference [5] shows that Virbela, tracks user interests and activities, helps brands to retarget customers according to their past inter-action or experiences. Reference [120] highlighted that the Crypto affinity targeting, specialized tools that creates users' affinity for cryptocurrencies and blockchain technology which allows brands to create subsets of users for targeting. The most popular success story of targeting in the metaverse is Nike, which built a community in the metaverse mainly younger audiences who are passionate about fashion, gaming, and sports [117, 118]. This is how virtual niche groups targeting can be done successfully to concrete the foundation in meta world.

Positioning: The metaverse allows marketers to distinguish themselves by providing interactive experiences that align with the audience's digital lifestyle [87]. According to [121], metaverse outscored all the other technologies as it has the advantage of experiencing the product in a multidimensional way that creates dynamic and engaging interaction with the users that creates a distinct position in their mind further supported by [22, 122]; López-Cabarcos & Piñeiro-Chousa, 2024). Unity, which specializes in developing 3D games, apps, and experiences, is the tool that is widely used to create 3D simulations to present the product [63].

One of the emerging services that metaverse can create is digital ownership. According to [10], with the help of metaverse brands can host exhibitions by using tools like Decentraland where users have the freedom to own their desired brand which ensures distinct positioning in the consumer mind. Blender, which specializes in real-time monitoring, assists in capturing user feedback which aids the brands to fine-tune their positioning by adjusting perceptual real-time feedback [2].

Reference [22] argued that positioning can be improved by way of creating community-driven environments where users have the right to make decisions regarding their ownership and payment methods. Roblox studios are performing this service for brands through tokenization to ensure the active participation of users and reshape brands' presence [123]. A great example of positioning in the metaverse is Louis Vuitton, which develops exclusive skins for the popular games League of Legends. They also launched their NFTs for their 200th anniversary. By utilizing this method, Louis Vuitton successfully positions itself in both fashion and digital luxury [87].

4.2.2. Metaverse application in marketing mix (4ps)

Product: The metaverse enables businesses to develop novel digital goods or improve existing ones [33]. Brands can offer virtual products or experiences like NFTs and exclusive in-game items, land properties, avatars, virtual events, etc., which users can buy and experience within the context of the information-primed genre as stated by [124]. According to [125], the metaverse market value has gone beyond \$800 billion by 2024 and is expected to grow by \$1.5 trillion at the end of 2029 in digital market value. Furthermore, people are already buying in-game assets from platforms such as Decentraland, The Sandbox, Axie Infinity, and Roblox, with the latest "play to earn movement" reignited by the Axie-Infinity blockchain game that lets users breed-based pet monsters. Numerous established brands have already started taking the opportunity of creating virtual products in the metaverse, which offer value for the consumers. For instance, Nike, 2023 launched its first NFT sneaker collection named Our Force 1 (OF1) on their Swoosh platform [126]. In addition, NIKE's "The Last Game" campaign in Fortnite offers game players the opportunity to wear custom Nike gear such as this OF1 virtual sneaker.

Companies create products and services in the metaverse (such as unique artwork) by constructing NFTs that follow the Ethereum Request for Comment (ERC) 721 or 1155 standard for effective minting. By dint of blockchain-based virtual worlds like Decentraland, virtual real estate has received exponential growth in recent times. In the case of tourism and the hospitality sector, customers can virtually visit and make tours to international destinations without being physically present there, which offers a good opportunity for people with time scarcity and this contributes to increasing demand for virtual tour and trip planning services compared to traditional physical tours.

Although theoretically it was claimed that the metaverse (or virtual space) cannot satisfy any customer need that is of the lowest

level according to Maslow's hierarchy of needs theory (physiological needs such as hunger, thirst, sex), Wendy's, the popular fast-food chain, has shown in contrast to this claim by developing a virtual restaurant in Roblox that allows players to order food virtually. Artists such as Travis Scott and Ariana Grande, for example, raise the stage digitally on Fortnite, allowing viewers to buy tickets for the event. Additionally, products can be customized and tested through 3D simulations in the metaverse before launching into the real market, making for a more immersive and creative product development process [127].

Price: The metaverse dictates the transfer of ownership of virtual products through virtual transactions in exchange for virtual currencies (i.e., cryptocurrencies) developed with blockchain technology. Ethereum, Bitcoin, Litecoin, \$MANA, \$SAND, Robux, and V-Buck are the most prominent cryptocurrencies currently used as modes of exchange in different metaverse platforms. Because of the tokenized pricing system, the metaverse enables fractionalized ownership of virtual assets where multiple users can own a single piece of asset combinedly.

According to [33], pricing is one of the most important components of the marketing mix as it is directly related to revenue generation and business growth. Reference [128] stated that in the metaverse businesses have insights regarding particular customer profiles, which will help to tailor prices in a dynamic and more personalized manner [129]. For instance, an AI pricing bot may adjust virtual land or in-game product prices related to user behavior and changes in the mousetrap economy in a metaverse [61]. This is used so that we can do other pricing like token-based pricing and dynamic and personalized pricing. The metaverse becomes involved in the physical world, and firms can find out about real-world product pricing from metaverse price patterns. This means that high fashion labels such as Gucci could price their physical clothes (e.g., virtual bags) based upon the performance of their metaverse-based line and more so if particular items overperform in the virtual world than what they assume to be likely [61, 129].

Place: Place in 4P deals with the physical distribution of goods between the seller and the buyer. To make it happen, distribution channels play a vital role in delivering the product or service to the buyer in the best possible way [33]. According to [70], to distribute the virtual assets and tokens metaverse ensures seamless transactions by using tools like Binance. Reference [76] stated that one of the unique characteristics of metaverse distribution is that it supports phygital distribution, which means virtual assets are bound with the physical products. Ethereum is the most used medium to perform this service and blend real and virtual worlds [78].

Reference [79] argued that metaverse eliminates intermediaries by utilizing tools named Solana that allow peer-to-peer exchange, which ultimately promotes direct user-to-user transactions. According to [130], dedicated virtual stores can be an effective place to purchase and interact with products easily by utilizing the tool, VRChat [78]. This virtual store can be leased to those who are willing to own their brand shop in the virtual environment through Somnium Space [33]. For instance, Decentraland leases virtual stores to brands such as Atari, Samsung, and Dolce & Gabbana to establish virtual storefronts or event spaces.

Promotion: The metaverse transforms marketing via the use of interactive and immersive advertising techniques [40]. According to [61], businesses may interact with customers in virtual worlds by using avatars and 3D models to create personalized ads and content. Unity Ads is a great platform to customize ads for customers who have distinctive characteristics and use behavior [131]. Reference [29] stated that like the digital world, banners and billboards can be created virtually in highly trafficked areas by using tools like

Dynamic Yield to ensure maximum visibility of the products and offerings.

According to [60], there are approximately 3.2 billion video gamers, which means in-game product placement can be an exciting option to promote products virtually. This product placement can be done by utilizing tools such as Unreal Engine. Reference [116] stated that event sponsorship has been one of the most used traditional ways of promotion for the past few decades. This can be integrated into the virtual world as well by using tools like Photon Engine that aid in sponsoring virtual events and position themselves in popular activities based on user number [40].

Influencer marketing is also an effective way of promoting products. In the metaverse, brands can target virtual influencers such as popular fashion icons and gamers through AltspaceVR. Different social media (Facebook, Instagram, and YouTube) influencers' engagement can be an effective way of promotion to target audiences who are still unaware of metaverse platforms [60]. By using Unity immersive product demonstrations can be performed as well to ensure better engagement. Nike already created NIKELAND, an interactive virtual space within Roblox, integrates branded virtual sportswear and accessories for avatars including promotional content with it [40].

4.2.3. Branding in the metaverse

In the metaverse, branding transcends traditional marketing tactics by engrossing customers in distinctive virtual worlds [132, 8]. According to [67], brands may set up virtual showrooms with tools like Matterport, which creates immersive environments for engaging customers. While waiting for these changes to happen, Varjo XR provides near-realistic interactions and brings high-fidelity images to these kinds of experiences [2]. In Blender, marketers can develop unique and interactive ventures that enable them to develop closer ties with consumers.

Reference [63] states that with Maya's sustainability in the construction of long-term virtual environments, the brands of the business stay perpetual. Both Qualtrics and Sprinklr [88] simplify cooperation with artists and influencers and co-creating content and virtual events that raise awareness and engagement. Capitalizing on the creator economy collaboration strategy, in the metaverse, brands can create partnerships with creators as brand ambassadors who will work to drive brand engagement and loyalty.

4.2.4. Customer relationship and partner relationship marketing (CRM & PRM) in the metaverse

By using immersive and interactive solutions that promote deeper involvement and cooperation, customer relationship marketing (CRM) and partner relationship marketing (PRM) are revolutionized in the metaverse. The metaverse offers ample opportunity for the brands to develop a more engaging relationship with the target customers. For example, Adidas used Minecraft and launched the popular "Create Your Own Stadium" campaign, which offers customers to get a unique experience and to engage with the brand innovatively. According to [62], by using VRChat and AltspaceVR, firms might strengthen relationship management by promoting mutual convening and engaging consumer experiences.

Reference [105] mentioned that Salesforce Virtual Spaces assists in developing these interactions even more by recording the preferences, as well as habits, of its clients for a more individualistic approach. Recent studies outlined by [132] suggest that by using AI analytics, one can implement clients' loyalty schemes and membership that would allow the firms to have constant engagement with clients. Smart Contracts also facilitate gamification, thus bringing the spirit of games to consumer loyalty programs [62].

According to [133], in the case of PRM, spatial.io helps manage and build virtual partner networking environments that encourage partnering. Reference [134] claimed that PartnerStack offers ways of organizing collaborative virtual workspaces for effective working, and CJM instruments enhance the partner onboarding and training processes. In addition to that, the use of blockchain technology in collaborations enhances transparency and trust within the ecosystem by utilizing the metaverse as an effective way of navigating the relationships ZEPETO has with partners and customers.

4.2.5. Competitive analytics (CA) in the metaverse

Real-time surveillance of competitors is possible in the metaverse with the help of today's technologies [135]. Reference [55] showcases that firms may counter this by employing operational real-time monitoring of competitors' activities in the simulated environments afforded by Unity Analytics and Unreal Engine Analytics. Reference [136] mentioned that it may be seen that the use of Brandwatch for businesses may enable competitive data analysis in 3Ds enhancing the strategic as well as more tactical perspective. Businesses can continue to keep their finger on the pulse of competitors by using predictive analytics including Hootsuite and Talkwalker that tell them what actions the latter will take in the future [137]. Reference [138] states that Binance provides companies with an insight into their competitors' NFT strategies and provides the tools to build and solve new real products and services in this constantly evolving digital environment as long as they maintain a competitive advantage in it.

4.2.6. Marketing metrics and automation in the metaverse

To enable operations management and scaling up within the metaverse, there is a considerable need for automation and key performance indicators [12]. Reference [139] stated that amplitude information about sales growth and marketing success can be employed by companies to make business-related decisions. Meta Ads Manager optimizes user engagement due to the features that allow the fast integration of advertising campaigns in many virtual places [129].

According to [123], by receiving real-time sentiment insights from consumers, Blender can help businesses ascertain the instant response of their consumers. Both Mixpanel and ActiveCampaign use up less of the marketer's time and energy, as well as the client's while remaining efficient at their tasks [80]. Client satisfaction and support from Roblox Studio are available day and night, globalization and efficiency, as well as working in the virtual environment are all helped by the software.

5. Limitation of the Study and Future Research Agenda

The major limitation of this study is that this study did not include other major databases such as Web of Science (WoS), PubMed, Dimension, and others. Since the concept of the metaverse is in its infant stage, the authors did not find much research on the application of the metaverse in the marketing strategies. Future research could include and combine multiple databases. Furthermore, the authors are unable to integrate the meta-analysis in this research, which can also be incorporated by the future research. Scientometric mapping in future studies can also contribute significantly to the advancement of the existing body of knowledge in this domain. Additionally, since the metaverse technology is a continuous evolving phenomenon, this research is a specific snapshot taken

in the specified time frame mentioned in the method section; hence, future research, at a later time, can show updates in the application of marketing strategies and tactics in the metaverse. In addition, different research mentioned the following points can be further explored by future researchers to better understand the marketing strategies and tactics in the metaverse:

- 1) Role of hyper-data availability in enhancing customer insights and impact of hyper-connected digital environments on consumer engagement within the metaverse [2].
- 2) How consumer interactions evolve within the virtual-physical blending metaverse and influence of blockchain technology on consumer experiences in the metaverse (Serravalle et al., 2023).
- 3) Role of gamification and interactive storytelling and virtual branding in enhancing brand loyalty within the metaverse and impact of AI and machine learning on personalized marketing experiences in the metaverse [56, 69].
- 4) How Gen Z interacts with brands in the metaverse and metrics to measure brand loyalty within the metaverse.
- 5) Role of metaverse in enhancing value co-creation among stakeholders in tourism and the influence of virtual experiences on real-world travel decisions [36]
- 6) How perceived regulatory uncertainty and cybersecurity risks influence consumer trust in metaverse commerce [140].
- 7) User privacy, data usage, and transparency in advertising practices in the metaverse and impact of cryptocurrency fluctuations on digital land sales [141].
- 8) Decentralized trust creation and social co-determination in the Web 3.0 metaverse and impact of human and avatar-based interactions on relationship marketing across the metaverse [54].
- 9) Psychological effects of immersive VR experiences on consumer confidence during online shopping and how cultural differences influence consumer acceptance of VR shopping experiences [55, 82].

6. Conclusion and Implications

To conclude, this study emphasizes that the metaverse is a big opportunity as the next frontier of digital marketing. This immersive digital ecosystem combines VR, AR, and AI to provide businesses with fresh opportunities to interact with consumers in ways that conventional marketing cannot. Early adopters like Nike and Gucci have proven using metaverse platforms brands can create unique and interactive experiences that give consumers something to engage with, something to be loyal to. Despite its significance, less research has been found discussing the application of marketing strategies and tactics in the metaverse. This study fulfills this gap and contributes significantly to the advancement of the existing body of knowledge in marketing literature by

- 1) Identifying the major characteristics of the metaverse in marketing,
- 2) Depicting the marketing technology evolution, and
- 3) Synthesizing the strategic and tactical applications of marketing in the metaverse.

This study presents the applications of marketing strategies and tactics in six (6) groups: STP, marketing mix, CRM & PRM, competitive analytics (CA), branding, and marketing metrics and automation. The new marketing framework in the metaverse consists of immersive engagement and virtual consumer behaviors as critical variables, which challenges the theoretical implications. Today, the current concepts like the 4Ps (Product, Price, Place, and Promotion) have become any digital good, tokenized ownership,

and the virtual channels of distribution. Based on these insights, future work can enrich a theoretical framework of marketing in virtual environments.

This implies that, to survive, businesses need to adapt to new technology and new skill set. For practitioners, exploring what might be possible using VR and AR tools for developing personalized marketing experiences and blockchain for transparency in virtual asset transactions. Brands also have to think about how to respond to privacy and security issues as more and more data-intensive interactions with consumers take place in the metaverse. By adopting these strategies, companies can adopt these strategies and for their part be ahead in the ever-changing digital world and attract tech-savvy audiences. Finally, we conclude that metaverse is neither just a fad nor fashion in marketing practices, rather this is going to be the style for the future marketing arena. And future marketers, irrespective of the industry they are doing business in, will be forced to take their businesses into the metaverse world if they wish to survive in the hypercompetitive marketing space to come. Hence, we recommend that astute marketers ought to get ready with the necessary skills and technologies to adapt to this new front of marketing opportunities and challenges.

Ethical Statement

This study does not contain any studies with human or animal subjects performed by any of the authors.

Conflicts of Interest

The authors declare that they have no conflicts of interest to this work.

Data Availability Statement

The data that support this work are available upon reasonable request to the corresponding author.

Author Contribution Statement

Mohammad Faruk: Conceptualization, Methodology, Software, Validation, Formal analysis, Resources, Writing – original draft, Writing – review & editing, Visualization, Supervision, and Project administration. **Sagor Ejarder:** Software, Formal analysis, Resources, Writing – original draft, and Visualization. **Rabeya Jannat:** Formal analysis, Resources, and Writing – original draft. **Md. Imran Hossain:** Software, Resources, Writing – original draft, and Visualization. **Md. Hafizur Rahman:** Methodology, Resources, and Writing – review & editing. **Md. Shahanur Islam:** Resources, Writing – review & editing, and Visualization.

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