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TRANSFORMATION OF THE USER EXPERIENCE THROUGH MARKETING ACTIVITIES IN THE METAVERSE

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ABSTRACT

Today's business environment faces companies with numerous challenges in retaining existing customers and attracting new ones, while simultaneously encouraging interaction and their engagement. One potential solution to these challenges is the metaverse, an imagined virtual space that merges the physical and digital worlds. Consumers can freely explore and communicate within a three-dimensional environment through digital avatars, utilizing technologies such as virtual, augmented, and extended reality. The metaverse, regarded as the next stage of internet development known as Web 3.0, constitutes a persistent and decentralized network of virtual worlds that fosters social, economic, and creative activities among consumers within virtual communities, facilitating the purchasing decision-making process. This paper examines how and to what extent marketing activities within the metaverse can transform the user experience. Since the metaverse offers personalized and multisensory interactions with products and brands in virtual stores and various events, such marketing activities can significantly enhance user engagement and loyalty. Despite numerous advantages, challenges in user data security, privacy, and accessibility require robust legal and technical frameworks to ensure sustainable metaverse development.

KEYWORDS: metaverse marketing, user experience, transformation, consumer engagement, consumer loyalty

TRANSFORMACIJA KORISNIČKOG ISKUSTVA KROZ MARKETINŠKE AKTIVNOSTI U METAVERZUMU

SAŽETAK

Današnje doba donosi poduzećima brojne izazove u zadržavanju postojećih i privlačenju novih korisnika, istovremeno potičući interakciju i njihov angažman. Jedno od mogućih rješenja tih izazova jest metaverzum, zamišljeni virtualni prostor koji spaja stvarni i digitalni svijet. Korisnici kroz digitalne avatare mogu slobodno istraživati i komunicirati unutar trodimenzionalnog okruženja koristeći tehnologije kao što su virtualna, proširena i produžena stvarnost. Metaverzum, kao sljedeća faza razvoja interneta nazvana Web 3.0, predstavlja trajnu i decentraliziranu mrežu virtualnih svjetova koja potiče društvene, ekonomske i kreativne aktivnosti korisnika unutar virtualnih zajednica, olakšavajući proces donošenja odluka o

kupnji. Ovaj rad istražuje kako i u kojoj mjeri marketinške aktivnosti unutar metaverzuma mogu transformirati korisničko iskustvo. Budući da metaverzum pruža personalizirane i višeosjetilne interakcije s proizvodima i brendovima u virtualnim trgovinama i na raznim događajima, takve marketinške strategije mogu značajno povećati angažman i lojalnost korisnika. Iako metaverzum donosi mnoge prednosti, postavlja i izazove povezane sa sigurnošću korisničkih podataka, privatnošću te pristupačnošću tehnologiji, što zahtijeva razvoj odgovarajućih pravnih i tehničkih rješenja za održivi razvoj.

KLJUČNE RIJEČI: marketing u metaverzumu, korisničko iskustvo, transformacija, angažman korisnika, lojalnost korisnika

1. INTRODUCTION

The metaverse, as a concept, refers to a virtual space rich in graphics and realism where people can engage in activities such as work, gaming, shopping, and socializing [Krowinska et al., 2024, p. 196; Fabac, 2022]. This space facilitates consumer interaction through digital avatars that represent their virtual counterparts. The metaverse is considered one of the most complex and promising innovations in the digital revolution, linking the physical and virtual worlds into a permanent, interactive environment characterized by 3D virtual worlds [Chaffey & Ellis-Chadwick, 2022, p. 509; Krowinska et al., 2024, p. 196]. Some authors define the metaverse as the next stage of the internet (Web 3.0), where the digital and physical worlds merge to create a continuous and shared virtual universe [Moro Visconti, 2022, p. 515]. Within this space, various real-life activities are conducted in interactive 3D settings accessible through VR headsets, AR glasses, or mobile devices [Krowinska et al., 2024, p. 191]. Simply put, the metaverse is a connected network of three-dimensional virtual worlds where individuals, represented by digital avatars, meet, communicate, create content, and trade using modern technologies such as virtual reality (VR), augmented reality (AR), and extended reality (XR) [Krowinska et al., 2024, p. 196; Fabac, 2022].

2. DEFINITION AND KEY DETERMINANTS OF THE METAVERSE

The conceptual definition of the metaverse derives from the word "*meta*," meaning "*beyond*" or "*across*," and "*universe*," referring to the cosmos [Moro Visconti, 2022, p. 530]. The metaverse signifies a new era of digital interactions, merging the physical and virtual worlds into a unique and persistent digital universe [Krowinska et al., 2024, p. 196]. The term was first introduced in Neal Stephenson's 1992 science fiction novel *Snow Crash*, describing a utopian virtual world where avatars, digital representations of consumers, play a central role, symbolizing the sophistication and status of their consumers [Tehnologija.hr, 2025]. These avatars act as digital doubles capable of communication, content creation, and trading within the metaverse. The entire process is supported by blockchain technology, ensuring transparent and secure access to decentralized financial and social applications [Moro Visconti, 2022, p. 530].

Today, the metaverse has evolved into a key technological movement significantly impacting social interaction, work, entertainment, and business [Krowinska et al., 2024, p. 191; Moro Visconti, 2022, pp. 515-516]. Its main features include real-time interactivity and communication, persistent existence, interoperability, and integration with various technologies such as artificial intelligence, cloud computing, 5G/6G networks, and quantum

computing [Moro Visconti, 2022, pp. 530-531]. Interoperability is ensured through the transfer of digital identities and consumer-owned content across platforms without losing connection to the consumer account or previously created value [Krowinska et al., 2024, p. 196]. While initially focused on entertainment and socialization, the metaverse also enables the growth of a digital economy based on blockchain, cryptocurrencies, and NFTs as certificates of digital ownership, encouraging consumer-driven economic activity [Moro Visconti, 2022, p. 530].

A more recent and modern definition of the metaverse emphasizes its multifunctional nature as a digital platform that enables [Krowinska et al., 2024, p. 196; Moro Visconti, 2022, p. 530]:

- a persistent, partially decentralized network of virtual worlds – decentralization is achieved through blockchain technology, granting consumers control over their digital assets and information
- multisensory interaction with digital objects and people – including sight, sound, touch, and other forms of perception that allow consumers to immerse themselves in the virtual world
- creation and exchange of digital goods, including NFTs
- a shared digital economy based on blockchain technology

From the above, it can be concluded that the metaverse represents a groundbreaking innovation in the digital revolution, opening new possibilities for connectivity and interaction between the digital and real worlds. Its application and development of advanced technologies enable new forms of social interaction, work, entertainment, and business, laying the foundation for the future of the internet and digital [Krowinska et al., 2024, p. 191; Moro Visconti, 2022, p. 515]. Consequently, an increasing number of companies are investing in technological infrastructure to enhance the metaverse, regularly updating it according to consumer preferences [Medianet, 2022].

One of the key advantages of the metaverse is the removal of physical barriers, allowing unlimited consumer meetings and interactions regardless of geographic distance [Moro Visconti, 2022, p. 533]. Consumers in virtual worlds can establish connections and collaborations as if they were physically together, opening new dimensions in global cooperation, education, and socialization [Linkram Digital, 2024]. Companies that implement some form of metaverse in their operations enable consumers to immerse themselves in a 3D environment, thus completely transforming the user experience. Since consumers perceive their presence as crucial for the seamless flow of activities, an added value effect is created that benefits the company. In other words, increased consumer engagement through interaction, work tasks, or meetings has a great impact on higher satisfaction and long-term loyalty. Virtual worlds are also important for education and training, where students and employees can develop skills in safe, controlled environments through simulations and virtual workshops, without the limitations of physical space and equipment [Smith & Zook, 2024, p. 55]. Although the metaverse represents an imagined world, its consumers are human beings who have socialization and networking needs, so an additional advantage of the metaverse is the creation of a sense of belonging that prevents isolation and strengthens community in virtual environments, improving consumers' mental health [Krowinska et al., 2024, p. 197].

Despite its many advantages, the metaverse also presents significant challenges and risks. One of the primary concerns is cybercrime. New virtual environments lack sufficient protection, making them vulnerable to fraud, identity theft, money laundering, abuse, and various forms of cyberbullying. Compared to existing internet platforms, security measures in the metaverse are still in their infancy, creating opportunities for exploitation [Linkram Digital, 2024]. User

experience can rapidly become negative if privacy and data protection are compromised [Lidermedia.hr, 2022]. For instance, if a consumer believes their personal data will be frequently collected, processed, or sold without clear consent and safeguards, they are likely to reconsider engaging with the virtual world [Smith & Zook, 2024, pp. 634-635]. Furthermore, concerns exist about the metaverse's impact on social and cultural values, as global virtual connectivity risks are destroying local identities and cultural diversity. Excessive reliance on virtual communities may foster separation from the real world and its traditions. The metaverse can also adversely affect mental health. Prolonged immersion in virtual environments may lead to increased social isolation, addiction, and distorted perceptions of reality, escalating psychological health issues. Additionally, prospective consumers may encounter technical barriers, such as the need for fast and stable internet connections, as well as expensive access equipment, which contribute to a digital divide and economic inequality in the adoption of metaverse technologies [Linkram Digital, 2024]. If consumers perceive that access to the metaverse is unequal, it can lead to dissatisfaction and generate aversion to purchasing products or services. Finally, there is the risk that large corporations could dominate virtual spaces, monopolizing economic activities and social interactions, as has occurred with traditional social networks, potentially resulting in the loss of authenticity and consumer freedom Smith & Zook, 2024, pp. 634-635].

3. HISTORICAL DEVELOPMENT OF THE METAVERSE

The concept of the metaverse evolved through several phases. Its origins date back to 1986 when a computer team from Lucasfilm Games (later known as Lucasarts) developed a system called Habitat [Krowinska et al., 2024, p. 191], which was the first major graphical virtual community and is regarded as a prototype to today's massively multiplayer online role-playing games. Habitat was designed as a system supporting thousands of consumers within a shared virtual space. It provided a real-time animated representation of an online simulated world where consumers could communicate, play, embark on adventures, fall in love, marry, divorce, start businesses, found religions, wage wars, protest, and even experiment with forms of self-governance. All these activities took place in virtual reality during the pilot phase from 1986 to 1988. Developers introduced various features, while consumer feedback laid the foundation for more complex online graphical worlds. A promotional video of Habitat celebrated it as "*A strange new world where names can change as often as events and surprises hide around every corner, where fantasy and fun reign supreme*." Consumers immersed themselves in this virtual world using avatars (their digital doubles), enabling them to enjoy the benefits of virtual life in an entertaining way, and the network of consumers gave rise to the first virtual community [Marshall, 2017].

The second key stage in the metaverse's development was the launch of the centralized platform Second Life, one of the earliest complex forms of the metaverse. It offered consumers the opportunity to create unique avatars and interact within a huge virtual world that is continuously expanded through content generated by the community itself [Krowinska et al., 2024, pp. 191-192]. Second Life represents an online virtual environment where consumers, through their avatars, freely explore, communicate, and create content without predefined tasks or objectives, granting them the freedom to shape their own experiences. The user experience is based on rich social interaction, including participation in concerts, conferences, shopping, and activities not possible in the physical world, such as flying and teleportation. Consumers can construct virtual objects, customize their spaces, and apply scripts providing avatars with new abilities, further enhancing engagement and creativity. Added value is evident in

purchasing decisions, as the virtual economy enables real financial transactions through the buying of land, clothing, and other goods [Virtualna stvarnost, 2022]. What distinguishes Second Life from other virtual worlds is the fact that most content is created in real time, offering consumers an authentic sense of shared space for collaboration and socializing. Consumer trust is maintained through freedom and privacy, with avatars representing virtual identities that are not anonymous and can be sanctioned if they violate established rules [Brown, 2022].

A third key stage is the era of the rise of online multiplayer games such as Fortnite, Roblox, and Minecraft, which nowadays are considered the most widespread practical representations of the metaverse [Krowinska et al., 2024, p. 193]. Their key characteristics are as follows:

- Fortnite is primarily known for its battle-royale mechanics, where consumers drop onto an island and fight for survival as the play area gradually shrinks. Fortnite has evolved far beyond the game itself, becoming a virtual social space hosting concerts, events, and branded partner campaigns. This platform dominates among teenagers and young adults, demonstrating a practical example of how the metaverse can become a space for social activities and cultural events. The buying and selling of various items occur within the application itself, ensuring sustained consumer engagement that requires consumers to regularly follow the latest news and benefits associated with timely purchases [Microperts, 2023].
- Roblox differs from Fortnite by focusing on user-generated content. The platform offers an extensive library of virtual worlds and games across multiple genres, from simple puzzles to complex simulations and role-playing. Its simple user interface and development tools enable young creators to actively shape experiences, explaining its popularity among children and teenagers. Roblox's digital economy revolves around its virtual currency, *Robux*, which can be bought with real money or earned within games. Content creators earn revenue by selling virtual goods and games, motivating continuous development and innovation, thus encouraging more frequent engagement of its consumers [Microperts, 2023].
- Minecraft, as the third most popular game, stands out as an open-type metaverse focused on creativity and freedom of exploration. Consumers gather resources, build custom structures, and participate in activities like farming, mining, and battling enemies. Though its graphics are stylized in a blocky form, the game's depth stems from nearly limitless possibilities for creation and world customization. Minecraft attracts a broad audience across all ages and serves as a platform for education, business, and socializing. Its sales process includes a one-time purchase of the game plus additional content and expansions [Microperts, 2023].

A common thread linking these three platforms is the pursuit of metaverse objectives such as enabling diverse social interactions, fostering virtual communities, encouraging consumers' creativity, and developing economies based on digital assets. However, they differ in their approaches, target demographics, and transactional models. Fortnite focuses on dynamic gameplay and live events, Roblox operates as a user-generated content ecosystem for younger consumers, while Minecraft promotes an open world and freedom of expression without specific objectives [Microperts, 2023].

Ultimately, the emergence of blockchain and cryptocurrencies in 2009 facilitated the development of new ownership and digital goods exchange models within decentralized virtual worlds [Moro Visconti, 2022, pp. 530–531].
The final key event is the establishment of the Web 3.0 concept, a new generation of the

internet currently in development [N1info.hr, 2022], which integrates the metaverse with the Internet of Things, blockchain technology, and various open-source software [Smith & Zook, 2024, p. 19; Krowinska et al., 2024, p. 196]. Web 3.0's main characteristics include decentralization, allowing data distribution across multiple locations, and placing control in consumers' hands. Internet access is provided without additional authorizations, enabling consumers to use a single account across various websites, with full compatibility and connectivity across different smart devices. To better understand data, consumers are encouraged to use artificial intelligence when searching for product or service information, with the premise that well-informed consumers can more precisely define their search queries [Bitstore.net, 2021]. Another key advantage of Web 3.0 is that consumers will be compensated for the time and data they spend online, significantly contributing to attracting consumers to the internet and creating a positive perception of the user experience.

4. TRANSFORMATION OF USER EXPERIENCE IN THE METAVERSE

The metaverse represents not only a technological innovation but also a profound transformation in how consumers perceive products, services, and brands [Marin, 2022]. Unlike traditional online shopping, in the metaverse, consumers with avatars can engage in rich, interactive experiences that include three-dimensional presentations, personalized services, and multisensory elements [Smith & Zook, 2024, p. 55]. Through the metaverse, consumers can try products in virtual stores, such as accessing virtual footwear and customizing its appearance visually, or participate in virtual events and promotions where they can interact, create content, and compete in brand-organized contests [Adaglobal.com, 2025]. Such content significantly extends engagement and fosters emotional connections with products and brands, thereby enhancing consumer loyalty [Smith & Zook, 2024, p. 631-633; Linkram Digital, 2024].

What makes the metaverse particularly attractive for marketing is its capability to collect extensive and precise consumer behavior data in real time, enabling personalized marketing campaigns and product offerings [Smith & Zook, 2024, p. 207]. Metrics such as time spent in virtual spaces, interactions with products, and updates to avatar appearance and preferences provide marketers with deep insights into consumer needs and interests, which can directly translate into increased sales and investment effectiveness [Smith & Zook, 2024, p. 207]. A successful example is Nike's Nikeland platform, where virtual games, competitions, and avatar clothing customization constitute an integral part of the shopping and branding experience, strengthening consumers' identities as brand ambassadors both inside and outside the metaverse [Smith & Zook, 2024, p. 631; Renovi, 2023]. Additionally, the role of gamification in the metaverse further motivates consumers to actively participate, be rewarded, and socialize in digital spaces, granting more autonomy and a sense of belonging through novel, complex content [Smith & Zook, 2024, p. 55; Virtualna stvarnost, 2022].

The transformation of the user experience in the metaverse also enables companies to enrich their communication strategies using personalized and interactive approaches, which can be achieved through traditional channels. Such strategies contribute to the growing trend of digital presence in virtual worlds, and they are becoming indispensable channels in modern digital marketing [Smith & Zook, 2024, p. 19]. The metaverse has elevated the user experience to a new level, providing a unique, multidimensional, and personalized platform that deepens the connection between consumers and brands in ways previously impossible, significantly influencing purchasing decisions [Metaverse reality, 2025].

5. PRACTICAL INTEGRATION OF MARKETING ACTIVITIES IN THE METAVERSE

The metaverse does not replace traditional marketing but serves as an additional tool to expand and enhance existing strategies through virtual spaces that users can access comfortably from their homes. This new digital medium enables companies to create unique experiences, such as virtual events, games, or interactive promotional content, which lead to higher consumer engagement. Marketing activities in the metaverse include various in-game advertisements, allowing companies to showcase themselves through branded games, virtual items, and live events [Linkram Digital, 2024]. Some of the most well-known examples of advertising in the metaverse are linked to three popular games: Fortnite, Roblox, and Minecraft, with a more detailed overview of these marketing activities provided below.

One of the most popular organic advertising campaigns on the Fortnite platform was executed by the American fast-food chain Wendy's. When Fortnite launched the new game mode "*Food Fight"*, two teams competed*: Team Burger* and *Team Pizza*. Wendy's chose to side with *Team Pizza* and eliminate players from *Team Burger* after discovering that, in the game, *Team Burger* stored their virtual beef patties in freezers, which contradicted Wendy's philosophy of using fresh, never frozen meat. Since the goal of the game was to be the last one to survive, Wendy's shifted the game's focus and began destroying the freezers instead of the opposing players, while promoting their slogan: "*Fresh, never frozen meat*." A live Twitch stream attracted more than a quarter of a million viewers, some of whom actively participated in the mission to destroy the meat freezers, while others impatiently followed the game's outcome, perceiving Wendy's as a quality brand that aims to satisfy hungry customers with fresh ingredients [The Drum.com, 2025]. Figure 1. Shows an example of Wendy's ad for the "*Keeping Fortnite Fresh*" campaign within the Fortnite platform.

Figure 1. Wendy's ad for the "Keeping Fortnite Fresh" campaign within the Fortnite

Source: https://www.jourdanhull.com/work/keeping-fortnite-fresh (accessed 22.08.2025.)

Another notable example is Hyundai's marketing campaign called "*Hyundai Future Adventure*" conducted through the Roblox platform. As the first global automotive brand present on Roblox since 2021, Hyundai uses this virtual world to showcase its latest technologies and innovations in an interactive and entertaining way. Users can drive Hyundai electric vehicles, participate in rescue missions with robots, customize their avatars, and engage in various activities and competitions. The campaign's goal was to connect with the tech-savvy younger generation and build long-lasting relationships with potential customers [Hyundai.com, 2021]. Figure 2. shows an example of Hyundai's ad for the "*Hyundai Future Adventure*" campaign within the Roblox platform.

Figure 2. Hyundai's ad for the "*Hyundai Future Adventure*" campaign within the Roblox

Source: https://www.hyundai.com/worldwide/en/newsroom/detail/hyundai-motor-opens-%25E2%2580%2598hyundai-future-adventure%25E2%2580%2599-on-roblox-to-showcase-vision-of-tomorrow-to-young-generations-0000000399 (accessed 22.08.2025.)

McDonald's partnered with the popular video game Minecraft to celebrate the release of *"A Minecraft Movie"* with a major global marketing campaign. The campaign features limited-edition promotional meals and collectible items inspired by Minecraft. Each offer includes in-game items, and in Singapore, special *Happy Meal* toys were introduced and refreshed regularly over five weeks. In addition to physical products, McDonald's provided digital experiences where fans could unlock unique Minecraft skins using codes found in the gift boxes. Users of the McDonald's app received additional codes for exclusive in-game content, and every *Happy Meal* included a code granting access to a digital game and a Minecraft mission inspired by McDonald's. The campaign received an enthusiastic response, and McDonald's further engaged audiences through creative appearances of the Hamburglar mascot zombie on the streets of Singapore, connecting the virtual and real worlds. This campaign stands as one of McDonald's largest marketing initiatives, successfully blending the physical and virtual worlds through interactivity and emotional connection with Minecraft and McDonald's fans [Vimalan, 2025]. Figure 3. shows an example of McDonald's ad for the "*A Minecraft Movie*" campaign within the Minecraft platform.

Figure 3. McDonald's ad for the "*A Minecraft Movie*" campaign within the Minecraft

Source: https://thevoicenewsweekly.com/**McDonalds-x-A-Mine**/ (accessed 22.08.2025.)

Škoda entered the metaverse in Germany through advertising in Decentraland, where users can view a 3D model of the cars from all angles. The campaign targeted "*early adopters*" by using unique location-responsive technology and GDPR-compliant methods. Initial results showed significant consumer interest and engagement, along with valuable data collection for further analysis [Krowinska et al., 2024, pp. 222-224]. This example demonstrates how the metaverse can serve as an effective tool for personalized and interactive marketing campaigns, especially in industries like automotive, where visualization and detailed product presentation are crucial in the purchasing decision-making process [Smith & Zook, 2024, pp. 371-373].

6. CONCLUSION

The transformation of the user experience in the metaverse represents one of the most significant shifts in the digital economy and the way consumers interact with brands. Unlike traditional online shopping, the metaverse offers consumers the chance to immerse themselves in rich, interactive 3D environments where they can try products, participate in virtual events, customize their avatars' appearance, and communicate with others in real time, all involving multidimensional sensory experiences. Such immersive interactions deepen consumer engagement and foster a stronger emotional connection with products and brands, ultimately leading to higher customer satisfaction and long-term customer loyalty, as well as to increased business revenue. Brands like Nike, through its Nikeland on Roblox, demonstrate how the metaverse can serve as a platform for innovative marketing strategies aimed at connecting with younger, tech-savvy audiences. Similar initiatives by McDonald's in Minecraft and Hyundai on Roblox highlight the broad potential of virtual worlds for interactive branding, product promotion, and real-time consumer data collection. This new dimension of user experience emphasizes personalization and user autonomy, with digital avatars playing an active role in

content creation and purchasing decisions. Furthermore, blockchain technologies and digital ownership certificates empower consumers by giving them control over their digital assets, enhancing trust within metaverse ecosystems. Marketing campaigns also leverage gamification, rewards, and social interactions to encourage greater user involvement and community building within virtual spaces. Despite its many advantages, the development and adoption of the metaverse face challenges related to user security and privacy, accessibility to technology, and the potential monopolization of digital spaces by large corporations. Establishing transparent, inclusive, and secure frameworks and technological standards is essential for the sustainable and equitable growth of the metaverse, ensuring it serves all consumers regardless of their geographic location or economic status. Ultimately, the metaverse represents a future in which user experiences are multidimensional, highly personalized, and deeply integrated into everyday life.

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