

How Metaverse Creates Value for Luxury Brands

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Abstract

Frame of the research. *Metaverse is quickly attracting the attention of luxury brands. Different levels of understanding and adoption are currently being utilized by luxury companies, whose attitudes toward this technology range from skepticism to enthusiasm. While Metaverse has the potential to reshape the way luxury brands create value for their customers and other stakeholders, the ingredients to create successful business models are still under scrutiny. Many variables seem to co-exist, and the synergistic impact of the different Metaverse environments, along with their enabling features and supporting technologies on luxury remains a relatively unexplored domain.*

Purpose of the paper. *Introduce a new conceptualization of the Metaverse for luxury brands, offering a framework to assist in building value for customers and stakeholders.*

Methodology. *Exploratory, qualitative research methodology, based on 14 in-depth structured interviews with top managers of luxury brands.*

Results. *The paper introduces a theoretical framework that links investments in Metaverse Technologies with customers' perception of luxury attributes, the influence across a wide spectrum of stakeholders, and the link with strategic objectives.*

Research limitations. *The sample of respondents, which represents the perspective of 14 top managers of the sector, might be enlarged in the future. Additionally, future research could develop quantitative analyses to structurally connect the different variables in the model.*

Managerial implications. *The research shows how luxury brands can unlock the full potential of the Metaverse to reinforce, re-generate, access, and engage relevant stakeholders, affecting a relevant set of luxury attributes, strengthening relationships with existing customers, and embracing new target audiences.*

Originality of the paper. *Introducing a new framework that connects Metaverse Technologies, with their impact on luxury attributes, stakeholders's audience and business objectives.*

Keywords: *luxury marketing, metaverse, immersive reality, value creation chain, martech, branding*

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1. Introduction

The Metaverse has been defined as a three-dimensional space where individuals can move, share, and interact using customized avatars (Hadi *et al.*, 2023). The term's origin lies in the Greek prefix "meta", suggesting transcending the boundaries of the physical realm, combined with the Latin suffix "verse", conveying entirety. In the evolving landscape of technology and digital innovation, the concept of the Metaverse has emerged as a groundbreaking paradigm, capturing the attention of individuals and industries alike.

This article takes inspiration from two trends of research that are relevant for analysing and evaluating the effects of new marketing technologies in generating impact in the very peculiar luxury sector: namely the *Value Creation Chain Model* and the *MarTech in Luxury*. The *Value Creation Chain*, as outlined by Keller and Lehmann (2003), delves into the intricate processes that underpin the generation of value for brands, connecting marketing investment choices, with customers' attitude formation and change, market performance and shareholder value. Concurrently, the research on *MarTech in Luxury* aim to forge links between emerging technologies (Javornik *et al.*, 2021; Bao *et al.*, 2024) and their influence on both traditional and novel traits, attributes and characteristics linked to luxury brands (Kapferer and Bastien, 2009; Wang, 2022).

This is particularly relevant in a context where, despite its 30-year history, the Metaverse appears to be still in full development, and there is still no consensus on its precise definition and boundaries of application, both among managers and researchers. To date, extensive research, and discussions on the Metaverse have yielded various interpretations, creating conceptual building-blocks that can serve to model how the Metaverse might affect the core industry attributes (Yoo *et al.*, 2023). In the context of luxury brands, where the experience is a pivotal element (Kapferer & Valette-Florence, 2019) crafted by offering consumers symbolic and experiential value alongside functional benefits (Pozharliev *et al.*, 2015), recent research argued that the Metaverse holds a huge potential for shaping the industry's future (Holmqvist *et al.*, 2020). Specifically, its capacity to evoke and enhance subjective and emotional experiences, encompass sensory, aesthetic, fun, fantasy, and emotions (Krishna, 2012). In addition, the virtual nature of the Metaverse offers a heightened level of immersion and new types of consumers' journeys (Schmitt *et al.*, 2015). Such journeys involve activities that create optimal experiences by integrating virtual and physical touchpoints (Swaminathan *et al.*, 2020), a concept already pioneered by top brands such as Bulgari, Gucci, and Dior (Jayawardena *et al.*, 2023).

Conversely, executives offer varying interpretations of the Metaverse, both in terms of its technological implications and the potential impact on business. Some view it as "*a world that speaks a gaming language and communicates with the youngest generation*" (Informant I), while others see it as a "*branding environment [...] that can provide both reputational and real economic value*" (Informant F) or "*a set of immersive creative worlds that are contextually very beautiful and able to narrate the history of the brand*" (Informant B) that might "*evolve the traditional clienteling*" (Informant E) in a context that "*is very attentive to respect its brand equity and heritage and often must refrain from too dynamic test and learn approaches, typical of other related sectors*" (Informant E). Or even "*being a different way humans can interact among themselves in a different way from traditional ones, it generate new ways where people can socialize, collaborate, play, and buy in a virtual 3D space*" (Informant L). Simultaneously, some managers remain dubious about the positive impact of the Metaverse in luxury, citing general skepticism and refraining from adopting it ("*The Metaverse is not our priority*", Informant A; "*We are not into Metaverse*", Informant Q), confining it into "*a pure novel channel of communication without clear impact*" (Informant N) or "*irrelevant if only adds a layer of interaction with the client, without a strong technological backing in the development and systematization of product images and information*" (Informant E). If not properly executed, some view it as a potential weakening factor of brand DNA, expressing concern about the risk "*of confining ourselves to this digital realm.*" For them, "*[...] a complete digital experience without a corresponding tactile counterpart holds no significance*" (as emphasized by Informant H), or "*if not well executed might hamper the uniqueness of luxury customer experience*" (Informant E).

As much of current managerial perspective and extant research has remained ambiguous to how the Metaverse can convey luxury attributes and ultimately generate value for those companies, a set of specific research gap might be identified to support the development of an integrated framework on “How Metaverse Boosts Luxury Brand Value Creation”. Specifically, (a) Which Metaverse technologies are more (less) useful in elevating traditional and novel luxury attributes, (b) How companies might use these Metaverse technologies to expand access, increase engagement, affect and release value to different stakeholders, encompassing customers, employees, investors, suppliers and, as a consequence, (c) Why the Metaverse might be a game changer in helping luxury brands building a sustainable competitive advantage and in achieving their strategic objectives.

This paper addresses these uncertainties utilizing a discovery-oriented approach (Muninger, Hammedi and Mahr, 2019) through a set of in-depth interviews to top executives in the luxury industry. Accordingly, the authors present a theoretical framework that links investments in Metaverse Technologies with customers’ perception of luxury attributes, the positive influence across a wide spectrum of stakeholders and strategic objectives.

2. Methodology

2.1 Research Design and Sample

The authors employed a qualitative research methodology, conducting in-depth interviews with industry experts to gain insights into the strategic utilization of the Metaverse by luxury brands. Embracing a discovery-oriented approach, as advocated by Muninger, Hammedi and Mahr (2019), the study aimed for a nuanced understanding of the subject matter, prioritizing participant insights. Since, current knowledge of Metaverse ecosystems is lacking, it was useful to study the phenomenon in a selected and information-rich setting (see Tan and Saraniemi, 2023). The authors proactively sought out key participants through their professional networks and industry contacts, employing specific criteria for selection. These criteria included individuals with management responsibilities, significant expertise in both digital technologies and the luxury sector, and a track record of active involvement in strategic decision-making processes. In-depth interviews were conducted with fourteen managers from Europe, whose profiles are detailed in Appendix 1. In line with prior literature, a semi-structured interview guide was formulated (McCracken, 1988). This methodological approach facilitated a comprehensive exploration of the strategic deployment of the Metaverse in the luxury sector.

2.2 Interviews and Data Analysis

We conducted semi-structured video conferencing interviews with fourteen informants from Europe between September 2023 and January 2024. Given the complex nature of the phenomenon studied, this is a suitable way to boost the credibility of our findings.

The interviews commenced with an initial open-ended inquiry, delving into the managerial perspectives on what the interviewees perceive as the Metaverse and the technology they associate with it. This exploration progressed by inquiring about their strategic intention to utilize such technology in both current and future business models, with a focus on its potential long-term impact on the luxury attributes and its business model. Additionally, the discussions touched on the general priorities and challenges faced by luxury brands in the Metaverse. Subsequently, the discussion shifted towards exploring the existing landscape of performance metrics systems within the Metaverse, aiming to uncover insights into the current state, identify information gaps, and ascertain desired options. Following this, the study delved into the examination of how elements of brand identity are adapted, translated and executed into the virtual realm of the Metaverse. Lastly, executives were prompted to provide insights on the development of brand engagement within the

Metaverse and how sensorial elements can be integrated in such interaction. The interviews, averaging forty minutes in duration, were recorded and transcribed verbatim. We selected information-rich participants (Patton, 2002) by using the authors' networks and snowball sampling. The interviewees willingly participated in the research and granted permission for the interviews to be recorded in a video format. The number of participants was not determined beforehand, but we followed the principles of saturation and stopped collecting data when no new information was added (Gummesson, 2005).

In terms of data analysis, initially, the researchers employed an inductive approach, immersing themselves in the data by identifying and comparing thematic codes across all interviews, as recommended by scholars (Strauss and Corbin, 1997). In the analysis of the interview data, we familiarized ourselves with the interview data by repeatedly reviewing recordings with transcripts, documenting our thoughts, interpretations, and questions. All interview data were transcribed using MS Teams automatic transcription software. To enhance accuracy, all authors meticulously reviewed and corrected transcripts while re-watching the videos on different days (Nowell *et al.*, 2017).

Throughout this process, they engaged in discussions and exchanged analysis memos that encapsulated initial reflections. The overarching goal was to obtain a comprehensive interpretation of luxury brands' perceptions of the Metaverse. This involved understanding the role of novel technologies (e.g., AR, VR, Blockchain) for luxury brands and discerning its distinctions from other digital technologies. Subsequently, the team conducted a structured, in-depth analysis, with the authors leading the identification and interpretation of quotes related to managers' understanding of the Metaverse in the luxury context. This process involved linking these insights with existing theories. Moving forward, the analysis delved into scrutinizing how the strategic deployment of the Metaverse supports luxury brands. Simultaneously, the aim was to construct an integrative framework that could provide valuable guidance to executives in their pursuit of investments in the Metaverse.

3. Metaverse's Distinctive Characteristics and Their Importance for Luxury Brands

Building on existing literature, and supported by statements from company executives, four characteristics of the Metaverse are now recognized, acknowledged, and explored in the context of luxury brands.

3.1 Full Sensory Experience

Academics have emphasized the potential of the Metaverse to deliver a *fully sensory experience*, describing it as "a virtual world with immersive capabilities providing an experience forecast to parallel the real world" (Dwivedi *et al.*, 2022).

Full sensory experience refers then to the phenomenon in which mixed technologies can alter sensory inputs, thereby modifying real or virtual environments (Yoo *et al.*, 2023) and inducing a sense of presence within a digitalized space (Kim and Bae, 2023). The Metaverse is grounded in extended-reality technologies (XR) that facilitate multisensory interactions (Barrera and Shah, 2023), allowing individuals to engage with virtual environments, digital objects, and other participants. As noted by Informant B "*In a sensory experience, we engaged all the senses of our guests to convey the essence of our products*". Hence, multiple sensory interactions and perceptions, such as visual, auditory, haptic, and kinesthetic experiences, are cultivated to foster heightened interactivity among users, thereby eliciting genuine participation and collaborative value creation among individuals (Krishna, 2012). As remarked by Informant A "*A real opportunity for luxury brands is to deliver a powerfully sensorial approach (...) and provide users with an extremely gratifying experience*", despite "*we are not yet at the stage of having a truly pleasant, rewarding and enjoyable setting in the Metaverse that can stimulate long-term permanence, engagement and sales for different luxury targets*" (Informant E).

3.2 Real-time Interactivity

Real-time interactivity, defined as “a technology-mediated network of extended reality environments to provide experiences characterized by their level of immersiveness, environmental fidelity, and sociability” (Barrera and Shah, 2023), refers to temporal synchronicity (Hoffman and Novak, 1996), and collaborative participation in the Metaverse (Barrera and Shah, 2023). In the context of luxury, brands like Gucci, Bulgari, and Louis Vuitton have introduced their virtual spaces and wearable assets on platforms such as Roblox, Zepeto, and Decentraland (Xi and Hamari, 2020). These platforms enable users to share the same experience simultaneously, make purchases and participate in real-time gamification activities within the brand’s virtual stores (Hadi *et al.*, 2023). Furthermore, previous research on Metaverse’s application in luxury focused on its potential to build brand engagement through gamification’s activities (Xi and Hamari, 2020), enhance brand experience (Eppmann *et al.*, 2018) and augment brand image (Holmqvist *et al.*, 2020). As a result, marketers are offering virtually wearable garments that users may wear while playing characters in games like League of Legends or exploring the Metaverse for various reasons (e.g., entertainment, sociality, events). Moreover, real-time interactivity can enable the alignment between physical and virtual events (Javornik *et al.*, 2021). “*We organized a live streaming event within these platforms, allowing users to watch the actual fashion show. An impressive 8 million people connected. (...) This initiative served to capture the essence of the original spirit intended for the real-world fashion show and convey it within the virtual realm*” (Informant F). As a result, luxury brands are now directing their efforts towards providing high-quality product simulation and visualization (Javornik *et al.*, 2021), as Informant B explains “*Investing in technologies that ensure proper aesthetic and brand storytelling performance is crucial*”.

3.3 New Digital Assets

The Metaverse involves the creation of *unique digital assets* in “an online collaborative shared space built of 3D environments that leverage high consumer immersion techniques to reduce the perception of technological mediation”. They connect with the creation of tradable digital media pieces with economic value within the Metaverse, where, for example, non-fungible tokens (NFTs) play a key role in representing the limited and exclusive use of digital products (Colicev, 2023). As stated by Informant F “*NFTs are like receipts, they ensure the digital ownership of a specific asset in a blockchain*”. This extends to virtual fashion and NFTs, offering novel avenues for consumers to engage in shopping, exchange goods, and assume digital identities through avatars (Hazan *et al.*, 2022). Moreover, the emergence of a new consumer generation has prompted luxury brands, including to collaborate with metaverse social platforms and introduce NFT luxury fashion items designed for virtual world game characters (Sung *et al.*, 2023). According to Informant C, “*NFTs are a medium of communication. Our approach to NFT projects initiates in the digital realm, but we extend the experience by translating them into physical and experiential dimensions. This strategy is designed to seamlessly immerse customers in the authentic reality of our brand*”. Such alignment is crucial for linking the virtual and the physical, and for enabling the creation of tight relationship between users and luxury brands, as Informant F highlights “*When we started (...) utilizing blockchain technology and NFTs, our primary objective was to engage with an audience that, up to that point, had not frequented Informant F stores or expressed any interest in the brand*”. An audience, as Informant D highlighted, that “*...might either have the monetary possibility to buy luxury despite not currently interested in specific product category...or, on the opposite, very interested in getting closer to the luxury world and signaling their presence through affordable products and experiences*”.

3.4 Unique Co-creation

It pertains to the active engagement of customers in shaping brand values through their participation in various marketing interactions, including activities related to the brand or specific virtual products (Payne *et al.*, 2009). Given the shared environment and experience provided by Metaverse's platforms (e.g., Roblox, Decentraland, Zepeto, Fortnite), co-creation can be elevated to new levels, as active engagement in online communities generates higher value (Kozinets *et al.*, 2010). Furthermore, considering the growing significance of value co-creation between brands and users, especially considering the increasing demand for personalized experiences (Chapman and Dilmeri, 2022), recent research emphasizes that luxury brands must harness co-creation strategies. This approach becomes instrumental in elevating crucial values such as hedonism and self-expression, thereby exerting a positive influence on consumer equity (Choi *et al.*, 2016). In line with this context, through gamification, the Metaverse enables a more direct influence on product offerings and the overall design of virtual stores (Hofacker *et al.*, 2016). As stated by Informant C “*Surviving in the metaverse is inextricably related to the notion of community; without a community, thriving becomes an impossible goal*”. Informant B reinforced the concept stating that “*...Metaverse might have a full impact for brands who can count on a proper community in the Metaverse platforms who can spontaneously generate engagement with the brand ... The absence of such community makes it harder to have impact on Metaverse platforms*”. For instance, the consistent engagement by brands through co-created games and dialogues facilitates users in attaining a significant level of co-presence within the luxury virtual stores (Colicev, 2023). As Informant F explains “*The essential mechanics of these Metaverse's platforms is the gamification that tempts players to return to that platform and dialogue with the brand*”. Importantly, such connection is expected to happen across a range of different technologies, as Informant B highlights “*Technology functions as a medium for creating an affective bond between the consumer and the brand*”.

4. How Metaverse Shapes Traditional and New Luxury Attributes

Metaverse unique characteristics have the potential to impact the luxury industry, by regenerating and reinforcing specific attributes, and ensuring access to and engagement with high-end brands. Luxury brands distinguish themselves for a set of traditional attributes that have allowed luxury managers to build a strong heritage and brand equity overtime (Dion and Borraz, 2017). They are premium-priced and regarded as rare (Moreau *et al.*, 2020; Wang, 2022) and unique (Kapferer and Valette-Florence, 2019). Moreover, the perceptions of authenticity (Morhart *et al.*, 2015), hedonism, and aesthetics generate a profound resonance with consumers (Venkatesh *et al.*, 2010). Specifically, brand heritage plays a pivotal role in shaping the essence of luxury. It encompasses various integral concepts such as craftsmanship, history, artistry, and uncompromising quality, all of which contribute to the distinctiveness of a luxury brand (Dion and Borraz, 2017). Indeed, without a rich heritage, a brand might offer expensive and authentic products, yet it falls short of earning the prestigious label of luxury. Heritage also serves as the cornerstone that amalgamates all facets of brand identity and image. It enables customers to forge a connection with the brand's historical journey, fostering a sense of identification with its corporate values (Cooper *et al.*, 2015).

4.1 Traditional Luxury Attributes

4.1.1 Brand heritage

Today, the emergence of the technologies connected to the Metaverse has empowered luxury brands to *reinforce* and *re-generate* value for existing consumers by leveraging their traditional luxury and novel attributes, enabling *access* and favor *engagement* to new customer groups, and *accelerating* the sedimentation of heritage and other luxury attributes for new high-end brands aiming

to position themselves in the luxury market. For instance, the use and adaptation of identity elements into gaming platforms (e.g., Roblox, Zepeto, Sandbox), through their intensive use by individuals, might provide the setting for a continued interaction frequency and engagement that could accelerate the creation of *brand heritage* to new potential consumers. As supported by Informant B “*we must craft experiences that resonate with heritage, as heritage comprises distinctive elements that require accurate translation into the Metaverse context [...] This ensures an authentic brand narrative*”, or Informant C “*When it comes to brand heritage and identity elements, transposition is necessary to ensure effective communication across different platforms and languages*”. Also, “*since heritage is reinforced by experiences with unique products that cannot be replicated and are often unavailable to customers, through the Metaverse, we can create a collection of distinctive products [...] In this space, we have the opportunity to construct retrospectives that narrate our unique story*” (Informant B).

4.1.2 Brand authenticity and craftsmanship

In line with this context, the development of *brand authenticity* in the Metaverse requires the translation of core identity elements into the digital space, such that they are resonant with both established and emerging user bases. According to Koles *et al.* (2024), the Metaverse presents an opportunity to expand and enrich the brand narrative by offering highly immersive and interactive experiences through gamification activities. This can include the recreation of iconic brand moments, showcasing craftsmanship and providing virtual tours of physical historical spaces linked to the brand, and alignment with the brand’s values and heritage. It might also help satisfying different needs in terms of prominence and social status in luxury consumption (Pino *et al.*, 2019). In this way, consumers who may have never properly and actively interacted with the brand or lacked financial access to luxury products, can still feel a sense of belonging to the experience and establish an emotional connection with it. “*Understanding the logic of the Metaverse is essential, as it involves taking the elements of brand identity and seamlessly extending them into this virtual realm. [...] This process requires the creation of authentic and easily recognizable experiences, coupled with the original brand storytelling*” (Informant I).

4.1.3 Premium price

When it comes to *premium price* in the Metaverse, each world possesses its unique language and logic. Consequently, the transaction price of a luxury brand in the Metaverse might be notably lower than that in the real world in absolute terms, but still maintain its core characteristic of being premium (Moreau *et al.*, 2020). However, within the Metaverse community, this pricing is perceived as luxury because it significantly deviates from the standard pricing in that virtual world. “*The costs are negligible. When we started, there was always the comparison with real-world prices. [...] A Informant F shoe in Zepeto was priced at \$5, and the Jackie bag at \$90. When considering the platform’s target community and exchange rate of 7 Zem to \$0.49, the Informant F bag isn’t just expensive; it’s exceptionally costly*” (Informant F); or “*Individuals invested in character customization to distinguish themselves within the game environment. They opted for branded accessories like necklaces and bottles, even at an average price of thousands of Euros, to avoid appearing commonplace within the virtual world*” (Informant F). Through this approach, the brand effectively introduces a premium price and luxury status to a world where the target audience might differ significantly from the established user base, establishing premium as a distinctive feature compared to the basic offerings.

4.1.4 Hedonic value

Moreover, the Metaverse has the potential to impact the *hedonic* aspects of luxury brands,

enriching customer engagement, entertainment, and fun, and fostering closer connections with specific target audiences. The setup of a realistic vs. fantasy avatar itself might be considered an act of hedonism, where the desired attributes are self-projected into a new “virtual-me” or “virtual-not-me”. Embracing avatars, virtual entities or characters influenced by human behavior, in fact has been proven to fulfill various interpersonal and personal purposes, such as fostering social connections, expressing oneself, and exploring identity, with different psychological factors influencing choices in creating avatars associated with the extent of perceived differences between their actual self, desired self, and perceived societal expectations. “*An avatar serves as your digital identity, representing you within a given ecosystem. Currently, these ecosystems are fragmented and diverse. Platform avatars vary significantly. For instance, Zepeto adopts a human-based approach, featuring high-quality 3D collections for sale and virtual stores with meticulous details*” (Informant F).

4.1.5 Aesthetics and quality

Moreover, through gamification and extended reality (XR) activities, the Metaverse can offer consumers an enjoyable experience, also facilitating the creation of 3D virtual models that authentically represent the *aesthetics* of luxury products and influencing customer perceptions on products’ *superior quality* (Hagtvedt, 2022). “*The general public might think that the creation of a NFT drop would be much quicker, but it is not necessarily so [...] we need expert craftsmanship, of a different typology, a digital one, to ensure a perfect and superior recognizable digital quality*” (Informant C); “*We chose to partner with Epic Games’ Unreal Engine 5, a technology that enables us to enhance the realism of the Metaverse experience. This decision was driven by the platform’s capabilities in terms of color treatment, light refractions on products, and cinematic elements, aligning with the aesthetic standards of our luxury brand*” (Informant B).

Accordingly, brands can showcase their luxury products in diverse virtual worlds, through the creation of “microverses”, in-game virtual tours or NFTs collections, also establishing connections with the real world. This approach enables new consumers to *access* the brand’s community and *engage* in its initiatives; “*[...] through the purchase of NFTs, individuals can secure a two-year membership, unlocking a spectrum of physical, experiential, and digital benefits*” (Informant C). However, “*style is a must and a main principle for the development of wear-on products; [...] in order to succeed, wearable MV technologies should be socially acceptable, and cannot present major disruptions vs. the desired style of what customers wear; [...] wearable immersive experiences that are neither streestyle nor luxury will not succeed in terms of large adoption; [...] thus the current challenge is to add technology without compromising vs the desired style*” (Informant L).

4.2 New Luxury Attributes

4.2.1 Sustainability

However, also new emerging luxury attributes such as *sustainability* and *sustainable consumption* (Kapferer and Valette-Florence, 2019), or *experientiality* and *hyper-personalization* granted by co-creation and advances in technology, are favoring the access to new market segments and contributing to shape the consumption patterns of luxury brands (Han *et al.*, 2017). In line with this context, *sustainability* entails a commitment by luxury brands to adopt eco-friendly practices, reduce environmental impact, and engage in socially responsible initiatives, with new luxury brands acting to be both “gold and green”. A recent stream of research (Ruusunen *et al.*, 2022) argued that the use of the Metaverse can also facilitate consumers to process and internalize green information. For instance, as stated by Papahristou and Bilalis (2017), the detailed and vivid information conveyed through 3D Virtual Prototyping and AR tool improve consumers’ awareness of green consumption, fostering *sustainable* beliefs. Moreover, the *extended lifespan* of products in the metaverse, facilitated by the availability of a ready-to-play product stock for repeated use in various contexts, not only

contributes to a reduction in waste production but also delivers tangible advantages to both consumers and companies (Sun *et al.*, 2021).

4.2.2 Experientiality

Experientiality (Gupta *et al.*, 2023; Rahman *et al.*, 2023) has heightened consumers' desire for more immersive and diverse experiences. This highlights the crucial role of luxury brands in providing pleasure and interactivity through emotional and sensory journeys (Han *et al.*, 2017). In line with this context, the Metaverse holds a huge potential for companies to develop their value propositions and build *ideal customer experiences* by combining virtual and physical touchpoints. As a result, customers could interact and engage with brands within the Metaverse, enjoying emotional and symbolic values and assuming a more dynamic and autonomous role in their experiences, leading to a journey of value co-creation (Makkar and Yap, 2018). *"We developed an interactive touch monitor housed in a display case, narrating the story of our Serpenti product from the 1940s to the present. This immersive experience was set in a Metaverse world, portraying a futuristic Rome where the strategic use of lighting on the clocks and jewelry created a visually stunning effect"* (Informant B); *"We are currently engaged in research and development involving sensors capable of detecting your physiognomy and size, generating a digital replica of you. This enables the virtual try-on of 3D garments, eliminating the need to physically try on multiple items. [...] This immersive experience may even involve scenarios, like walking in a specific location during sunset, aiming to stimulate your imagination about the usability and aesthetic appeal of the showcased garments within the Metaverse"* (Informant H).

4.2.3 Hyper-personalization

Technology enables luxury to move beyond the traditional older high-net-worth individuals' segment. Metaverse can provide *"access"* and *"engagement"* to new targets. The younger generation can be approached through proper communication across interactive channels. Given that *"luxury brands have always had a very top-down approach to consumers"* (Informant A), the Metaverse can be viewed as a mechanism for fostering *"co-learning relationships between brands and users. [...] on the one hand, brands communicate the heritage and craftsmanship perception of their product, and on the other hand, digital native users drive brands to create tools to keep up with society and technology"* (Informant C), and *"...a gateway of meaningful access to newer younger targets to enter in contact with high-end Brands..."* (Informant D). As generations such as Millennials and Gen Z are reshaping the conventional offerings of luxury brands, particularly with a focus on seeking *personalized* experiences, Metaverse offers unique opportunities for consumers that are allowed to shop through a *hyper-personalized* experience in the comfort of their personal space. Indeed, the integration of AR/VR into the existing shopping experiences includes the creation of personalized virtual closets across luxury retailers as well as virtual try-on products across the gaming landscape (Jain *et al.*, 2023). *"We introduced a sensory encounter to convey the "essence" of a Informant B fragrance. Guests wore a small sensor, resembling a tiara, capturing their brain waves as they strolled through the experience. They could listen to a melody associated with the perfume, observe the perfume bottle, and feel the sensation of it filling up through an automated bottle with motors. Upon completing the journey, an AI software analyzed the collected brain waves, creating an emotional map and generating a personalized artwork, potentially available for download to their phones"* (Informant B); *"The possibilities for creativity within these virtual worlds are boundless, as is the potential for customization. In the Metaverse, we designed logo-branded items like necklaces, bottles, and even the trail left by the avatar, available for users to purchase for personalization. Additionally, for those who owned the NFT Brand Grail and the Brand Vault Material (a digital fabric), we informed them to visit the site on a specified day for the chance to create their own customized bag"* (Informant F).

5. Which Metaverse Technologies Are More (Less) Effective in Elevating Traditional and New Luxury Attributes

Given the multi-layer nature of the Metaverse, this section aims to elucidate the correlation between traditional and novel luxury attributes within the framework of key metaverse-enabling technologies (Figure 2). For instance, under a technological aspect, seven pillars have been identified to facilitate user access to the Metaverse. These include i) Augmented Reality (AR) (Yoo *et al.*, 2023), designed to organize and display digital overlays atop the physical surroundings, ii) Virtual Reality (VR) (Lee *et al.*, 2021), offering a three-dimensional perspective of the digital world iii) Mixed Reality (MR), positioned between AR and VR, enabling user interaction with virtual entities in physical environments (Dwivedi *et al.*, 2023), iv) Artificial Intelligence (AI), steering automatic digital twins, avatar autonomy, and computer agents (Barrera & Shah, 2023), v) Computer Vision, encompassing body tracking, scene understanding, and image processing (Yoo *et al.*, 2023), vi) User Interactivity, aiming to enhance the performance of delay-sensitive applications (Kim *et al.*, 2021), vii) Blockchain, facilitating the exchange of NFTs and cryptocurrencies and connecting multiple Metaverse's platforms (Sung *et al.*, 2023).

5.1 Augmented Reality

In particular, Augmented Reality (AR), with its capacity to enhance the real-world environment through computer-generated elements, profoundly influences the traditional attributes associated with luxury brands (Javornik *et al.*, 2021). As supported by Informant H *“As of now, we are enthusiastic users of augmented reality and all associated aspects involving the utilization of 3D elements. We recognize significant and intriguing potential in this regard”*. Within the realm of *heritage*, AR brings historical narratives to life, offering interactive experiences that showcase craftsmanship, granting an immersive storytelling in conjunction with tactile experiences, a more traditional ways of experiencing product authenticity. *“We have consistently focused on storytelling, particularly in the reception context. One crucial aspect, within the framework of our stores, is to consistently establish an environment where individuals can immerse themselves in emotional experiences while respecting the inherent value proposition and authenticity of the products. It's essential to continually elevate people's adrenaline levels, ensuring that the value proposition always offers something more exhilarating”* (Informant B). The *hedonistic* aspect is enriched as AR introduces layers of enjoyment and engagement, providing users with a sensory-rich encounter (Lee *et al.*, 2021). Furthermore, The simulations superimposed on physical surroundings can visually accentuate the exquisite materials, *quality*, craftsmanship and *aesthetics* of luxury products. *“The utilization of this technology ensures the appropriate aesthetics and brand storytelling, allowing for the creation of a novel in-store experience”* (Informant B). In the context of novel attributes, AR significantly contributes to enhancing the luxury-brand *experience* by bringing brand elements in close proximity, visually centering the consumer on the brand, and eliciting affective, cognitive, and sensory responses. Additionally, by stimulating multi-sensory cues, AR facilitates heightened product and avatar *personalization*. *“Augmented reality is facilitated through sensory objects of varying effectiveness, ranging from current monitors to more symbiotic personal systems, including tactile sensors, visual sensors, auditory sensors, and others. [...] We reiterate our keen interest in AR technology because it enables hyper-realistic 3D experiences. In this regard, the metaverse is particularly intriguing as it serves as a platform that encourages the extensive utilization of AR and 3D visualization”* (Informant H).

5.2 Virtual Reality

Virtual Reality (VR), crafting fully immersive digital environments, enables the creation of visually stunning virtual worlds that align with the brand's distinctive style and values. As for AR, VR contributes to the perception of *quality* by allowing users to explore luxury items in intricate

detail, fostering an appreciation for craftsmanship, *aesthetics* and excellence (Yoo *et al.*, 2023). To fully engage with the Metaverse, consumers frequently utilize VR headsets like Oculus or haptic devices, allowing them to move and interact within 3D environments much like they would in a physical setting, thus enhancing the user *experience* and the connection with the brand. “*We are exploring technologies that enable the creation of significant sensory experiences. Currently, we have undertaken small initiatives using Oculus and virtual headsets, as well as smart mirrors. On the digital front, virtual try-ons and tailored technologies allow individuals residing on the other side of the world to experience services comparable to those offered in a physical store*” (Informant C); “*The integration of 3D elements into these immersive worlds has seamlessly become a component of our digital value chain. Between 2022 and 2023, we have developed over 300 Brand Heritage Game Ready products. These have been meticulously crafted with Unreal and Epic Games, forming a repository of 3D products that are deployed as needed. [...] In this way, we can prolong the lifespan of these products*” (Informant B). In line with this context, the metaverse facilitates the dematerialization of inherently durable – by definition - yet intangible products, allowing luxury brands to take an additional stride toward sustainability (Sun *et al.*, 2021).

5.3 Mixed Reality

Mixed Reality (MR), seamlessly blending elements of both AR and VR, plays a pivotal role in preserving and celebrating the heritage of luxury brands. By integrating historical elements into the real world, MR enhances the brand’s connection with its past (Yoo *et al.*, 2023). The *authenticity* of luxury products is underscored as MR bridges the gap between the digital and physical realms, offering consumers a cohesive and *personalized experience* (Hoyer *et al.*, 2020). Indeed, MR is often considered a more robust iteration of AR, establishing more interconnected and collaborative relationships among physical space, user interaction, and virtual entities, thus generating a more enjoyable digital journey and eliciting *hedonic values* (Lee *et al.*, 2021).

5.4 Artificial Intelligence

Artificial Intelligence (AI), driving automatic digital twins, avatar autonomy, and computer agents, transforms luxury attributes through tailored *experiences*. The *exclusivity* of luxury is enhanced as AI enables *personalized* interactions, catering to individual customer preferences. Moreover, AI contributes to the maintenance of product *quality* through smart manufacturing processes, reinforcing the brand’s commitment to excellence. “*This technology enables the creation of an avatar, serving as your digital duplicate, which can be adorned with 3D garments*” (Informant H); “*Platform avatars are inherently diverse, reflecting the distinctive aesthetic and language of each platform*” (Informant F).

5.5 Computer Vision

Computer Vision, encompassing body tracking, scene understanding, and image processing, enhances the *aesthetic appeal* of luxury brands in virtual environments. By optimizing the visual elements of virtual worlds, computer vision contributes to the overall aesthetics of the brand, aligning with its unique identity. Moreover, this technology ensures a seamless, enjoyable, and authentic consumer experience, striving to minimize disruptions associated with delays in avatar movements or the processing of backgrounds in the diverse worlds of the Metaverse (Hoyer *et al.*, 2020). “*The emphasis on quality is a fundamental aspect of a luxury brand. The personalized experiences, along with the high level of 3D and photorealism, contribute to a spectacular presentation. For instance, in Brand’s virtual world, you can find Brera, a famous Milan’s neighborhood, where meticulous details like the sanpietrini on the floor and carefully crafted lighting are incorporated. Here, quality transcends mere functionality and transforms into beauty, creating a delightful and aesthetically*

pleasing experience” (Informant F).

5.6 User Interactivity

User interactivity, facilitated by mobile headsets, haptic devices, and platforms like Oculus, amplifies the hedonistic aspects associated with luxury brands. Engaging and interactive features elevate the pleasure and enjoyment of virtual experiences, creating a sense of experience’s authenticity and hedonism. Moreover, it plays a pivotal role in shaping the perception of digital products by enhancing the vividness of images, backgrounds, and luxury items, thereby guiding the user toward a more intense and clear understanding of authentic materials, artistry, and craftsmanship. However, many luxury companies have shown resistance to the use of Oculus and VR headset devices as a means of accessing the Metaverse, citing concerns about their outdated technology, high cost, potential for causing motion sickness, and a sense of isolation from reality. *“Oculus might create a significant friction [...] as it imparts a dystopian effect. It diminishes the sense of elegance and elevation within the luxury store. The major pain point is that the sales advisor cannot discern what the customer is viewing at that moment, leading to a loss of eye contact between the salesperson and the customer. [...] When entering a luxury store, customers seek to feel pampered and receive a particular type of guidance; discomfort is not what they desire”* (Informant B).

5.7 Blockchain

Finally, blockchain, a decentralized and secure ledger technology, safeguards the *exclusivity* of luxury products in the digital realm. Its role in combatting counterfeiting enhances the perception of *authenticity*, a cornerstone of luxury brands. Moreover, its nature as a digital database, i.e., a secure peer-to-peer network ensuring transaction security (Sung *et al.*, 2023), enables the exchange and purchase of NFTs. NFTs are digital records associated with digital (intangible) or physical (tangible) assets, and their ownership is recorded on the blockchain. *“NFTs serve as a communication channel between the brand and users. “In one of our NFT launches, a purchase granted a two-year membership entailing various physical, experiential, and digital benefits. Remarkably, we successfully sold 5,000 memberships within a mere 22 hours”* (Informant C); *“Brand’s inaugural NFT took the form of a digital artwork auctioned by Christie’s, with the proceeds of the \$25,000 sale donated to a specific charity. Our approach has consistently been artistic, emphasizing authenticity to steer clear of the speculative aspects that NFTs can sometimes generate”* (Informant F).

Furthermore, we present a table summarizing the findings derived from prior literature and recurring themes from interviews, offering insights into the effectiveness of each technology. The effectiveness is categorized on a scale from three to one arrow, denoting “Very effective,” “Effective,” and “Somewhat effective,” respectively (refer to Figure 1).

Fig. 1: Technologies associated to Metaverse and their impact on traditional and novel luxury attributes.

		Technologies as associated to the Metavers e						
		AR	VR	MR	AI	Computer vision	User interactivity	Blockchain
Traditional luxury attributes	Heritage	***	^	↑↑		↑↑		
	Authenticity	↑↑	↑↑	↑↑			↑	↑↑↑
	Hedonism	↑↑	^	↑↑	↑↑	***	^	
	Aesthetics	↑↑	^	↑↑	↑	**		↑^
	Premium price				↑			↑↑↑
	Exclusivity				^			↑↑↑
Newer luxury attributes	Quality	***	↑↑	↑↑↑	↑↑	^		
	Experientiality	***	***	↑↑↑	^	**	***	^
	Sustainability	***	***	↑↑↑			***	
	Personalization	***	↑	↑↑	↑↑	***		↑^

6. How Metaverse Creates Value to the Different Stakeholders

This section aims to highlight the implications and connections between the Metaverse and the luxury audience, delineating a transformative landscape across various stakeholders, ranging from existing and new customers, to employees, investors and suppliers (Figure 2).

6.1 Customers

Traditionally, luxury items were exclusive to the wealthiest social classes and high net worth individuals, serving as conspicuous symbols of their affluence and social standing (Seo and Buchanan-Oliver, 2015). This demographic, characterized by substantial purchasing power, gravitated towards products and experiences that emphasize elegance, craftsmanship, quality, and sophistication (Rosendo-Rios and Shukla, 2023). Their preferences typically aligned with well-established heritage brands renowned for consistently delivering exceptional products and services and delightful in-store experience. *“Stepping into a luxury store signifies a multifaceted experience. It involves the indulgence of attentive service from the staff and the sensation of entering a space where all five senses are enveloped in the essence of the brand. The encounter extends beyond the physical realm, offering a psychological experience that goes hand in hand with the tangible surroundings”* (Informant D). However, other segments indulge in occasional forays into luxury, such as a belt, a cap or a bag, often reflecting their financial capacity. This group, while lacking substantial savings, exhibits an increasing interest, attention and dedication to the brand (Seo and Buchanan-Oliver, 2015). Consequently, these individuals form a noteworthy customer base for luxury brands, yet their cultural knowledge of the essence of luxury, behaviors and lifestyles markedly differ. Some studies suggest that while the wealthiest consumers view luxury as a means to express their prestige and social status, the middle classes perceive luxury items more as a form of self-reward or personal prize (Silverstein and Fiske, 2003).

6.1.1 Current customers

When it comes to the Metaverse, luxury brands started to “test and learn” novel strategies to *re-generate and reinforce* connections with their current consumer base. For instance, through immersive experiences, personalized interactions, and exclusive offerings, brands could foster additional engagement and strengthen the loyalty of their existing clientele, fostering a more profound relationship. *“The implementation of the Metaverse empowers us to transcend geographical constraints and address the heritage challenge faced by luxury brands. A consumer situated in New York, Indonesia, or any other location, who cannot physically be in Italy, can still partake in the immersive experience and access digital products offered by our brand. This approach not only ensures effective brand storytelling but also enables us to strengthen relationships and foster rapport with existing consumers, even when they are geographically distant”* (Informant B). Moreover, the Metaverse holds the potential to facilitate luxury brands in establishing connections with diverse target audiences, including those who may not have the means to acquire luxury items in traditional settings. As supported by Informant D *“The Metaverse serves as a novel communication channel, providing a unique avenue to engage with diverse communities and customers. It offers the opportunity to deliver distinct and immersive experiences, fostering a new dimension of interaction”*.

6.1.2 New customers

In line with these insights, a shift in the concept of luxury has surfaced over the recent years, driven by a younger tech-savvy target of consumer (Hadi *et al.*, 2023), known for their digital affinity, and less accustomed to engaging with luxury brands in their typical daily journeys (de Kerviler & Rodriguez, 2019). Nevertheless, mirroring their quest for varied, personalized and engaging

experiences, luxury brands have begun leveraging the Metaverse as a portal to *access* and *engage* with these segments, creating an appropriate Brandtelling (Giorgino and Mazzù, 2018), establishing connections, granting co-creation experiences, serving as an experiential gateway into the realm of luxury. For instance, according to industry experts, the resulting offering present in the Metaverse would then not be only an entry point to attract future customers with limited “disposable income”, but also relevant younger customers who now are less likely to spend their “disposable time” engaging with luxury brands. *“At the strategic level, our primary objective was to expand our reach to new audiences through a dual approach involving gaming and Web 3.0 activities, encompassing blockchain and NFTs. By establishing a constant and authentic dialogue we can generate much more lasting emotion than anything else. [...] Through fostering a consistent and authentic dialogue, we can cultivate enduring emotional connections that surpass the impact of other interactions”* (Informant F); *“In the Metaverse, especially within gaming platforms, older generations may feel excluded due to the perceived technological complexity, as the environment predominantly caters to a younger demographic. Brands face a significant challenge in finding effective ways to directly communicate with these newer generations in this digital interactive space”* (Informant I). Still to be explored behaviors of the new Generation Alpha, that, *“being digitally native, is on the one side expecting a superior seamless and perfect experience when interacting in the digital world, on the other side is rediscovering the pleasantness of interaction with physical environment at retail stores”* (Informant E), *“where the traditional digital experience is becoming a sort of commodity, and newer experiences might generate new type of engagement”* (Informant E).

6.2 Employees

Expanding the range of potential stakeholders, the integration of the Metaverse within an organization can also influence employees’ work efficiency and enjoyment (Hwang, Shim & Lee, 2022). Therefore, companies started to *“implement mandatory training sessions for all employees, providing comprehensive knowledge about the fundamentals of the Web 3.0 world, NFTs, and related concepts. [...] Instances have occurred where buyers of our NFTs visited our physical stores, asserting their association with specific projects, only to encounter sales associates who were unfamiliar with the subject matter”* (Informant C). Ensuring that all staff members are well-versed in these emerging technologies is crucial for maintaining consistency and understanding across customer interactions and *“the successful execution of a project within the Metaverse necessitates the wholehearted collaboration and alignment of all departments involved. Each department must be on board, working cohesively, and providing unwavering support to ensure the project’s seamless integration”* (Informant I). Accordingly, as reported by (Koohang *et al.*, 2023) the Metaverse extends beyond consumer engagement; it provides a unique space and *belongs* for employees to connect, collaborate, and contribute to the brand narrative. By fostering a sense of belonging within the virtual realm, luxury brands can enhance internal collaboration, creativity, and overall employee satisfaction, translating into a more cohesive and motivated workforce (Buhalis *et al.*, 2023).

6.3 Investors

In addition, the Metaverse introduces novel avenues for luxury brands to *outperform* in the eyes of investors. Successful integration and innovation within this digital space can be perceived as a strategic move, signaling adaptability and foresight (Duhaylongsod and De Giovanni, 2019). Brands that effectively leverage the Metaverse to enhance customer experiences, drive sales, and strengthen brand equity may attract heightened investor interest and support as *“the ultimate layer will in any case be the financial impact, generated by additional direct, or indirect, sales”* (Informant E).

6.4 Suppliers

Finally, collaborating and *loyalize* with leading technology suppliers is integral to a luxury brand’s

success in the Metaverse. Furthermore, engaging in direct communication and forming partnerships with various technology partners, including suppliers and resellers, offers the chance to access and experiment with technological advancements, including VR hardware and AR visualization tools (Zabel *et al.*, 2023). As supported by Informant C *“The strategy we adopt involves extensive outsourcing as we recognize the complexity of the field and refrain from assuming expertise in-house. Our approach is to seek inspiration and influence from external experts, allowing us to be enriched by their knowledge. By collaborating with those who specialize in the field, we aim to bring our unique perspective and distinctive qualities to the table, fostering a collaborative environment that encourages innovation and creativity”*.

The Metaverse offers a dynamic arena for luxury brands to reinforce existing relationships, engage new demographics, foster internal cohesion, attract investor confidence, and fortify partnerships with technology suppliers. Navigating this digital frontier strategically can unlock unprecedented opportunities and elevate the brand’s standing across various stakeholders.

7. Metaverse as a Tool to Build Competitive Advantage and Achieve Strategic Objectives

The potential of the Metaverse to *reinforce, re-generate, access, and engage*, affects the essential attributes of luxury, impacting the different stakeholders of luxury brands (Figure 2). The presence of a well-executed Metaverse strategy might then deeply affect the brand value creation chain “customer mindset - market performance - shareholder value” (Keller and Lehman, 2003), and the related primary strategic objectives of luxury, encompassing brand equity, customer equity, as well as financial and market performance. In this respect, executives underline diverse area of the Metaverse’s impact on luxury strategic objectives. While some *emphasize “transposing heritage, brand identity, and image elements in a recognizable way in the Metaverse”* (Informant I) to stimulate brand equity, others view the Metaverse *“not only as a channel for building equity but mostly as a means to increase turnover”* (Informant D), and to *“introduce new revenue streams for luxury brands”* (Informant F). Through the sale of virtual goods, Non-Fungible Tokens (NFTs), and exclusive digital experiences, brands can, in fact, tap into a lucrative market (Belk, Humayun & Brouard, 2022). Additionally, the Metaverse offers a platform for innovative collaborations and partnerships, expanding revenue potential beyond traditional channels. *“With the first NFT drop, we generated revenues of 8 million. Of course, economic revenue is a very important aspect to consider in the Metaverse”* (Informant C).

Within the Metaverse, luxury brands can forge strong associations and establish a memorable presence, thereby fortifying their uniqueness and fostering positive perceptions among consumers (Hadi *et al.*, 2023), thus fulfilling objectives of brand equity building, in terms of creating brand assets that contribute positively to the overall value delivered by a product (Aaker, 1996), while generating a differential superior impact on the brand (Keller, 1993). As stated by Informant A *“if you aim to establish a brand presence in the metaverse, it is essential to adopt a long-term perspective on its activation and to cultivate users’ trust over an extended period. Building a sustained presence allows for the gradual development of visibility and awareness within the metaverse community. This strategic approach ensures that the brand becomes a trusted entity, contributing to its lasting impact and resonance in the Metaverse space”*. Notably, the application of reality enhancement technologies like VR, AR, and MR in the luxury sector affects the customer journey and contributes to strengthening brand equity (Javornik *et al.*, 2021; Buhalis *et al.*, 2022). These technologies, by enabling virtual personalization and simulating the experience of donning luxury products through avatars, impact the perception of luxury attributes. This, in turn, fortifies the association with the brand’s name and symbol, ultimately bolstering brand equity (Kim *et al.*, 2023). Additionally, engaging in *gamified* activities within the Metaverse has been shown to facilitate deeper emotional connections and awareness with the brand, fostering greater intimacy and commitment among consumers (Barrera and Shah, 2023). *“Gamification is the fundamental mechanism for creating*

constant interaction, contact, and dialogue with the customer. [...] We always strive to translate the quality of our products into beauty, and beauty, in turn, translates into a pleasant experience. By delivering this kind of experience, we can bring customers closer to our brand and increase consumer equity” (Informant F).

Finally, as confirmed by executives, luxury brands can elevate market performance by paving the way to *“a more positive perception of the brand by investors in the luxury sector”*, through better growth expectations derived from the *“access to new potential segments and engagement of underserved ones”*, and the *“capability of ensuring innovation within the boundaries of luxury authenticity and heritage”*. Virtual environments provide a global stage for brands *“to connect with audiences worldwide, breaking geographical constraints”* (Informant C). Moreover, staying active in the Metaverse allows brands to stay attuned to emerging trends, ensuring they remain relevant and adaptable in a rapidly evolving luxury market.

8. Relevance of Key Enablers to Ensure Metaverse’s Impact

The interconnection of the Metaverse’s attributes and core elements with luxury brands, along with its impact on strategic objectives, initiates a reinforcing loop that continuously evolves and elevates the future luxury attributes. As emphasized by industry experts, a prerequisite for the Metaverse to have a truly positive and sustainable impact on such industry involves the implementation and effective execution such as organization, IT systems, and performance metrics (Figure 2).

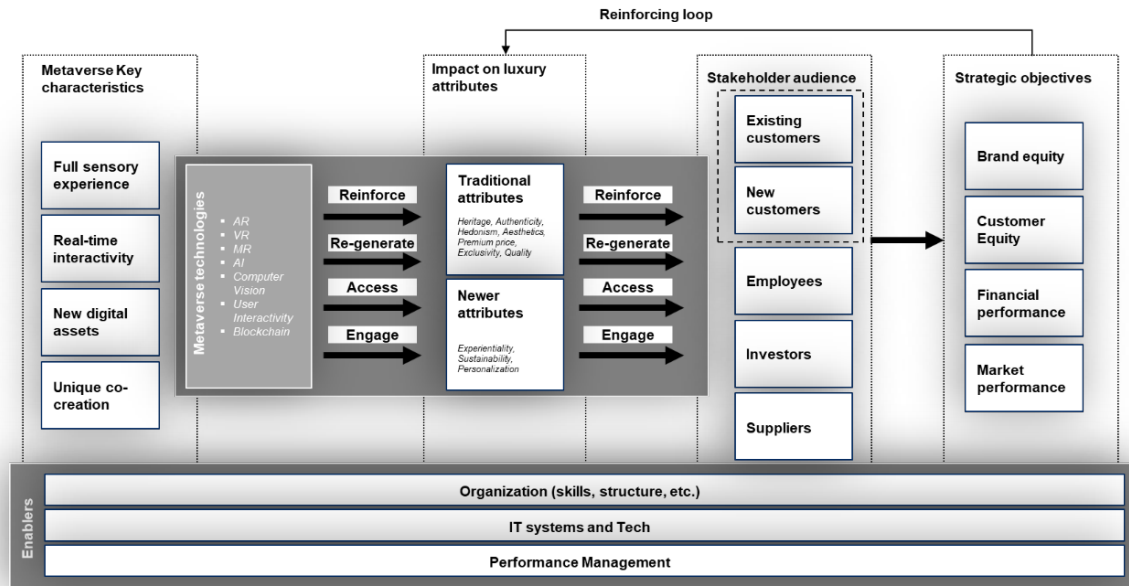
First, luxury brands that want to establish their presence in the Metaverse need to develop the necessary skills and expertise, as well as a proper organizational structure, that can help navigating and capitalizing on the opportunities presented by this new means of communication (Hwang *et al.*, 2022). For instance, it is crucial that *“all the departments are aligned, updated and supportive between each other”* (Informant I). This involves *“training and upskilling employees to understand the dynamics of virtual environments, digital technologies, and emerging trends”* (Informant C). Additionally, the organizational structure should be flexible and adaptive to integrate new roles and responsibilities related to Metaverse strategies.

Second, the backbone of successful Metaverse integration lies in the agile integration of advanced technologies that support seamless connectivity, data analytics, virtual experiences, while guaranteeing protection and security. The IT infrastructure should be capable of handling the complexities of Metaverse interactions, ensuring a smooth user experience (Lee *et al.*, 2021), and a dedicated function should be ready to *“keep exploring and testing alternatives for the benefit of the business”* (Informant B) and *“advancing the use of available technologies for guaranteeing market impact of the Metaverse”* (Informant F). Moreover, since vast amounts of data will be generated exploiting the Metaverse, luxury brands might apply the blockchain technology to the data storage system to guarantee the de-centralisation and security of information shared in the Metaverse.

Finally, implementing appropriate performance metrics systems enable luxury brands to track and measure the impact of each Metaverse’s initiative and project. To date, there still a lack in terms of desired availability of performance indicators to monitor activities in the Metaverse as *“most of the KPIs are proprietary to the varies platforms, so there’s not an independent verification”* (Informant A). According to Informant H, *“the measurements should be essentially similar to those in a physical store because, ultimately, the experience involves an avatar entering a virtual store. There may be additional considerations related to the location, specifically its physical position within this virtual world; however, measuring such aspects has become more intricate”*. Therefore, brands should deploy analytics tools and KPIs such as *“monitoring user engagement, repeated visits, time spent when building a microverse”* (Informant A), or *“assessing the effectiveness of virtual experiences, and gathering insights into consumer behavior within the Metaverse”* (Informant F) are fundamental, as the *“Metaverse should evolve and integrate the performances of the current online and physical retail, sales and communication channels”* (Informant E). Moreover, *“it is extremely relevant to*

understand the pace at which wearable technologies are adopted, if they are adopted by the expected consumers' target, and how they use them [...] which music they hear and why, which content they look at, in which occasion devices are activated" (Informant L). All these metrics will be essential for making informed decisions, optimizing strategies, and demonstrating the return on investment in the virtual space.

Fig. 2: Integrated model of the impact of Metaverse on the luxury industry



9. Conclusions

The Metaverse provides a unique opportunity for luxury brands to reinforce their brand and customer equity, while improving their financial and market performance. Starting from the understanding of the current mix of attitudes toward this set of technologies, ranging from skepticism to enthusiasm by top luxury executives, this article aims to establish a theoretical framework, and the related logical building blocks, that can assist luxury managers in making informed decisions about implementing impactful digital strategies within the Metaverse.

By relying on a set of structured in-depth interviews, our research shows that luxury brands can leverage the Metaverse to reinforce, re-generate, access, and engage relevant stakeholders, by positively affecting a relevant set of luxury attributes. This enables brands not only to strengthen relationships with existing customers but also to embrace new communities and target audiences. Once luxury attributes are aligned with the Metaverse, brands may experience a positive impact on their strategic objectives, provided that specific enablers are in place. Therefore, once the above is set, a significant effect might be expected in strengthening brand and customer equity, improving company performance, and creating the basis for a reinforcing loop.

Additionally, this paper argued that through careful consideration and the adoption of the right strategies, luxury managers can unlock the potential of the Metaverse, leverage its unique features to their advantage and create new opportunities for differentiation and growth. The Metaverse can then serve as a powerful tool for luxury managers to achieve their business objectives and stay ahead of the curve in an ever-evolving market.

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Appendix 1. Disguised list of interviews

Future strategic interest in the Metaverse	Informant	Sector of the company	Range of turnover (2022)	Informant Role	Years of experience
Yes	Informant A	Luxury jewellery	<0,1 bn Euro	Global broadcast Director	10-20
Yes	Informant B	Luxury jewellery and watches	> 1 bn Euro	Innovation&Transformation Director	>20
Yes	Informant C	Global luxury fashion	> 1 bn Euro	Head of New Media	10-20
Yes	Informant D	Global luxury automotive	> 1 bn Euro	Global Marketing Director	>20
Yes	Informant E	Global luxury automotive	0,1-1 bn Euro	Chief Marketing Officer	>20
Yes	Informant F	Global luxury fashion	> 1 bn Euro	VP Metaverse Ventures	10-20
Yes	Informant H	Global luxury fashion	0,1-1 bn Euro	Chief Information Officer	>20
Yes	Informant I	Global luxury fashion	0,1-1 bn Euro	Ecommerce Manager	10-20
Yes	Informant L	Global luxury eyewear	> 1 bn Euro	Global Head Brand eyewear	10-20
No	Informant M	Luxury jewellery and watches	> 1 bn Euro	Chief Client Officer	>20
No	Informant N	Global luxury fashion	> 1 bn Euro	CEO	>20
No	Informant O	Global luxury fashion	> 1 bn Euro	Chief People Officer	>20
No	Informant P	Global luxury fashion	> 1 bn Euro	Global HR Director	>20
No	Informant Q	Global luxury fashion	> 1 bn Euro	CEO	>20

