

A large, abstract graphic on the left side of the page, consisting of several overlapping, semi-transparent circles in shades of blue, purple, and pink, creating a sense of depth and movement.

FASHION IN AR/VR

Bringing Sketches to Life in 3D
to Enhancing Brand Storytelling
and Marketing

PART 1: BRINGING SKETCHES TO LIFE IN 3D

Virtual Reality (VR) and Augmented Reality (AR) have stepped beyond their origins in gaming and entertainment to make a significant impact on fashion design. These technologies are weaving innovative solutions into the fabric of the industry, transforming how designers craft garments, how brands tell their stories, and how customers engage with the world of fashion.

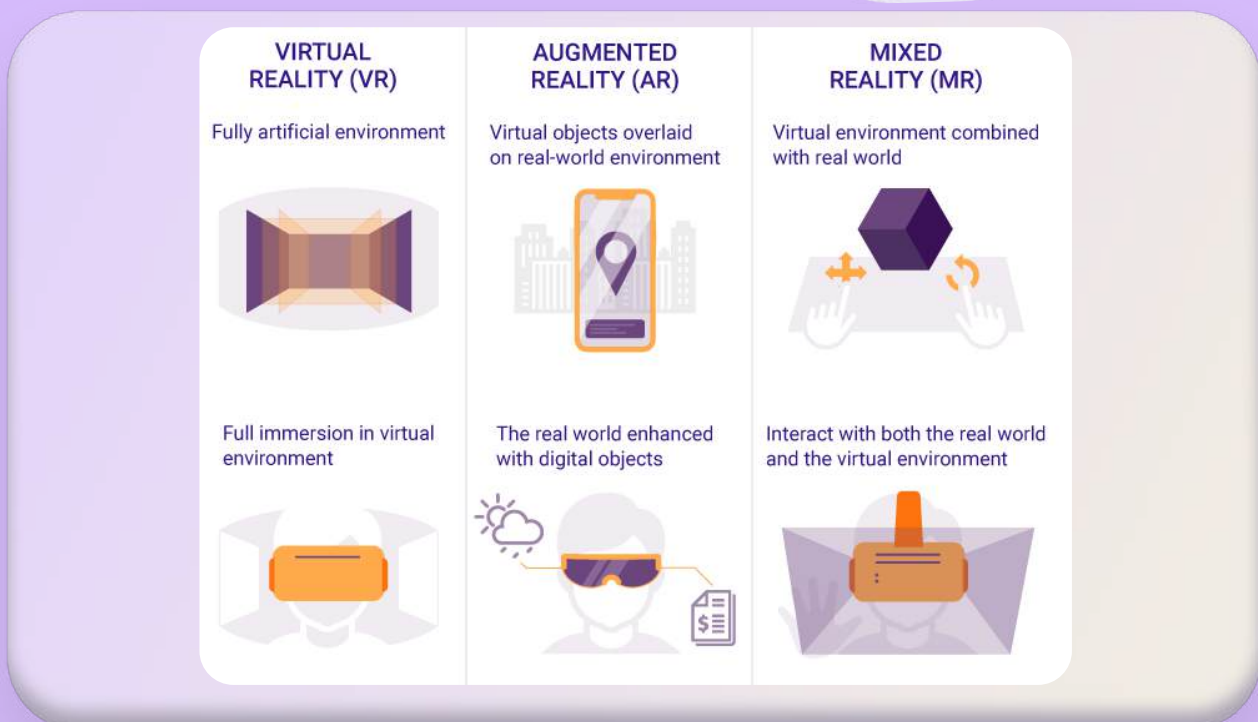


Image Source: RubyGarage

While AR integrates digital elements into the real world by overlaying digital information such as product details, prices, and reviews directly onto a user's view, VR creates a completely immersive digital environment. This technology offers experiences far beyond the traditional front-row seat, viewing everything from a 360-degree perspective.

HOW CAN AR/VR IMPACT FASHION DESIGN?

Fashion designers have traditionally relied on paper sketches or 2D software to bring their ideas to life. However, VR and AR enable designers to sketch and reimagine their 3D garment prototypes directly in a virtual environment. This spatial technology allows for a more immersive and interactive design experience. Through mixed reality technology, designers gain accuracy in measurements and precision in garment proportions and visualize color combinations.



Image Source: TAAS Inc.

As VR is integrated into the design process, it stitches together a seamless garment of time efficiency, minimizing the need for costly physical prototypes and reducing errors before they unravel. In an industry where communication can be challenging, designers, brands, and stakeholders from different locations can now visualize hyper-realistic digital prototypes. This innovation effectively bridges gaps and removes barriers that previously hindered collaboration.



Image Source: VR Scout



Image Source: Kim Schoenmakers (CLO3D)

Moreover, this journey towards digital optimizes the supply chain, decreasing reliance on physical samples and lightening the environmental footprint. The digital approach to designing and producing clothing is a breath of fresh air for the planet. The technology nudges towards an eco-conscious solution to fashion's biggest obstacles by reducing material waste and energy use, marking a shift towards a more mindful and sustainable future. By eliminating the need for physical resources and reducing carbon dioxide emissions from waste and transportation, VR fashion helps conserve precious natural resources. VR in fashion also holds the potential to address ethical issues within the industry. Promising healthier and safer working conditions while reducing the negative social impacts traditionally associated with fashion production and alleviating the stigma surrounding labor conditions in developing countries.

In the first part of this two-part blog series, we will explore the production processes of the fashion industry that AR/VR will impact.

DESIGN TO PRODUCTION

Virtual fashion design can be used in two distinct ways. First, it can be used to aid in the creation of real-world clothing, which provides artists and designers with greater flexibility to explore their creations during development and gauge client reactions before manufacturing begins. Second, with AR, designers can scan body types for precise measurements. This capability facilitates the creation of more customized clothing, enabling experimentation with different fabrics, colors, and shapes through virtual fittings, all while keeping the customer central to the process.

STEP 1: FROM SKETCH TO DIGITAL PROTOTYPE

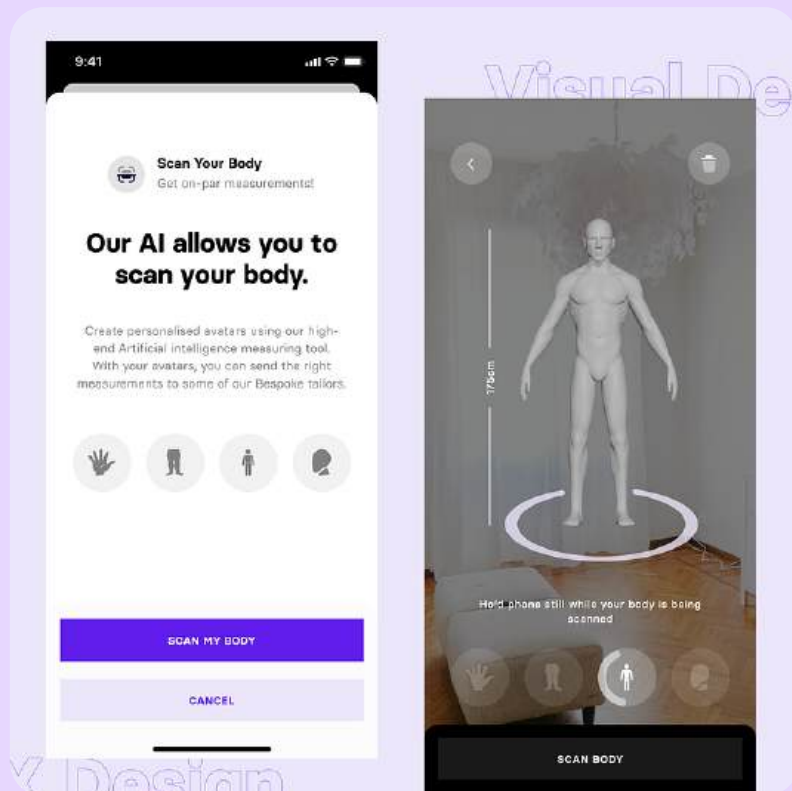


Image Source: Elvis Obi (Dribbble)

Digital prototyping with AR/VR offers a canvas where creativity can be experimented with in a boundless 3D space, achieving accurate proportions, fabric textures, color, and volumes. Fashion designers can now paint with pixels, crafting masterpieces with extra meticulousness. No longer constrained by physical prototypes, digital designs quickly transform ideas into market-ready collections and reduce costly errors along the way.

STEP 2: COLLABORATIVE OPPORTUNITIES



Image Source: Adobe

Mixed reality technology bridges gaps that traditional methods struggle to overcome. Designers, brands, and stakeholders can collaborate in immersive environments, breaking down communication barriers and overcoming geographical distances. This enhanced communication optimizes the supply chain and reduces reliance on physical samples.

STEP 3: SUSTAINABLE PRODUCTION



Image Source: MDPI

VR offers a space for designers to endlessly experiment with digital prototypes, eliminating the need for tangible samples, streamlining the creative process, and conserving both time and resources. The shift towards VR and AR in fashion supports eco-friendly production by reducing the need for physical prototypes, thus minimizing material consumption and waste.

This promotes sustainability and lowers the industry's carbon footprint. By eliminating waste from discarded physical garments, conserving resources through reduced carbon emissions and water usage, and decreasing reliance on shipping, these technologies foster sustainable consumer trends. Adopting VR and AR in fashion design can also address ethical issues related to labor practices. These technologies create a safer work environment, reducing the negative social impact often associated with fashion production in developing countries.

USE CASES

1 SYKY X ANREALAGE

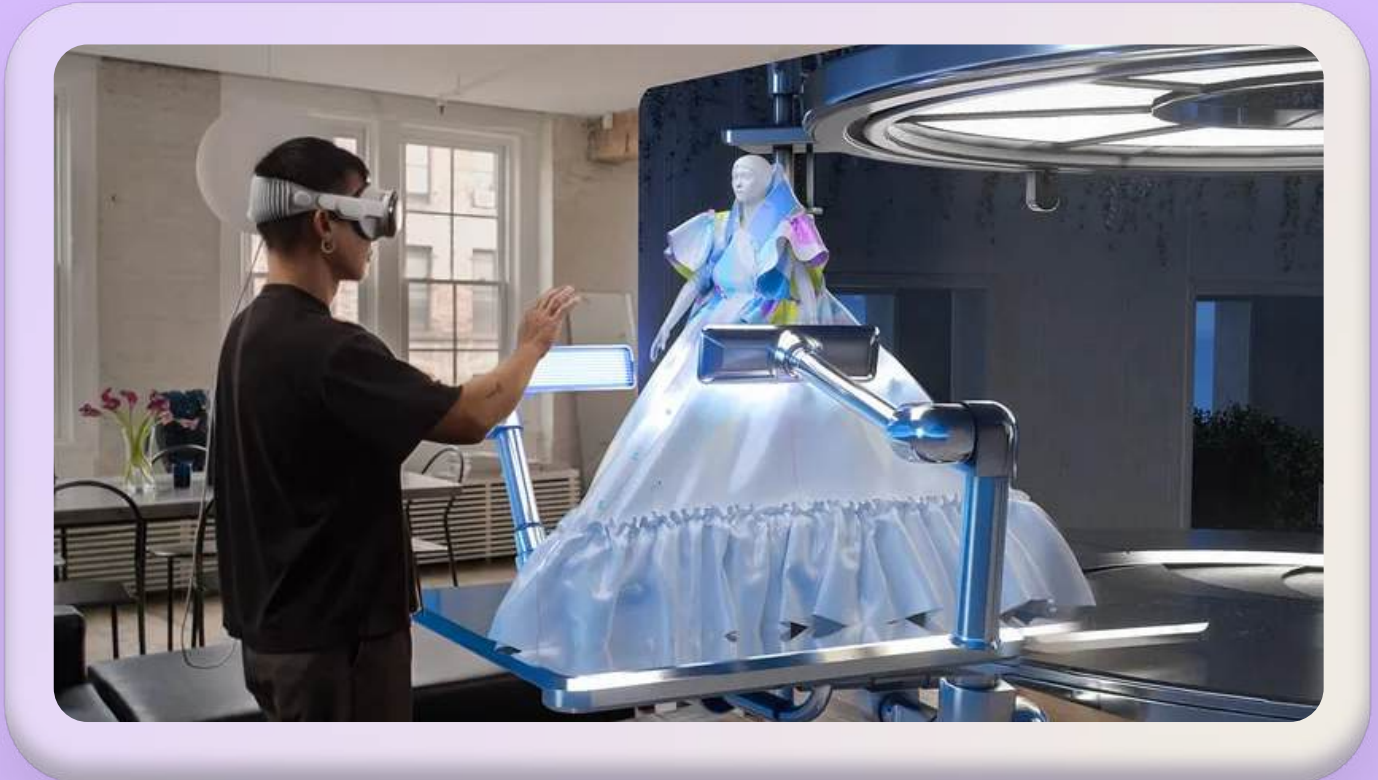
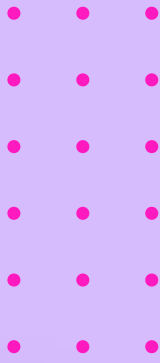


Image Source: SYKY

SYKY's Apple Vision Pro app, "Anrealage," offers a fully spatial world to experience the behind-the-scenes thought process of the creative masterminds behind the most exciting luxury fashion designers and brands today. Through the Apple Vision Pro app, viewers can examine its intricate details and learn about the design, fabric, and craft that have gone into making it. In this 3D realm, hyper-realistic depth, opulent textures, and spatial video converge to plunge users into luxury craftsmanship and design beyond imagination. The debut experience presents Anrealage founder and legendary Japanese designer Kunihiko Morinaga's color-changing gown, 'The Pyramid Dress'. The immersive experience brings enthusiasts and collectors closer than ever to the world of luxury fashion.

2

STEPHY FUNG



Image Source: Stephy Fung

One of the trailblazers in this field is Stephy Fung, a digital fashion artist making jaw-dropping phygitals, NFTs, and digital outfits for the metaverse and AR environments. Stephy has carved out a niche for herself by blending streetwear aesthetics with traditional Chinese painting elements, creating a unique and iconic style and producing intricate digital fashion masterpieces. Recognized for her iconic blend of streetwear and traditional Chinese painting elements, the compatibility of these tools with 3D modeling software ensures smooth integration into her workflow.

“CLO3D has allowed me to create outfits of my dreams into reality,” says Stephy. “I truly think there is power to that, to be able to digitally visualize a look before and lessen the waste of fabric and sampling helps not only myself to understand how a digital look can translate to physical but also the manufacturer. It’s also given power to showcase my identity within my designs as a British Chinese designer; I’m able to create clothes that really represent who I am as a person.”

“There are so many possibilities when it comes to digital fashion as digital assets can be transferable, easily accessed and shared.”

Stephy continues to say that as the digital fashion industry grows, aspiring digital fashion designers should take the time now to learn these tools, as it will position you more advantageously as fashion brands implement programs such as Clo3d to improve production efficiency.



Image Source: Nike

3 NIKE'S AIR MAX SCORPION

Nike utilized VR and advanced simulation to create the Air Max Scorpion in 2022. Over eighteen months, the team worked entirely from home, accelerating the adoption of new technologies due to the pandemic. VR opened the doors for designers to recreate their designs in 3D, while simulation software significantly decreased the time required to test various design iterations. The team was able to test several iterations in just five weeks, a process that would have previously taken eight weeks for a single concept. These new tools also minimized the need for physical samples, conserving resources and time. Computational engineering ensured consistent performance across different-sized shoes, a challenge previously managed through more labor-intensive processes. This innovative approach has cut down Nike's development timeline by a quarter while allowing for more complex designs.

CHALLENGES AND FUTURE OUTLOOK

The fashion industry is no stranger to innovation. In recent years, VR and AR have offered unparalleled opportunities for designers to transform their creative processes. However, like any disruptive technology, the path to widespread adoption is fraught with challenges and opportunities.

High Initial Costs

Implementing VR and AR technologies requires a significant financial investment. Purchasing the necessary hardware and software, along with ongoing maintenance costs, can be prohibitive for smaller fashion houses and independent designers.

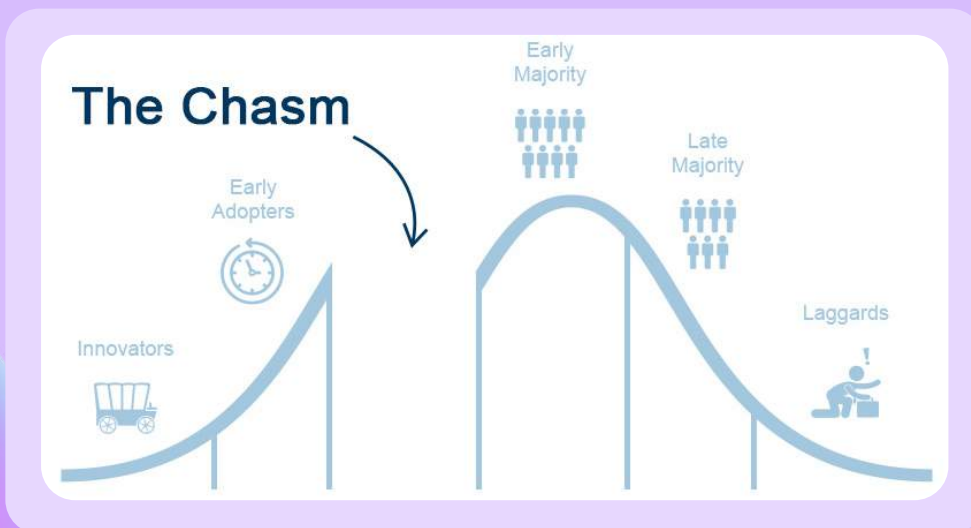


Image Source: AKF Partners

Learning Curve

Transitioning from traditional design methods to VR and AR is not seamless. Designers accustomed to sketching and sewing by hand must learn to create in a digital environment. This shift demands time, training, and a willingness to adapt to new tools and methodologies.

Technical Limitations

Despite its potential, VR technology is still evolving. Current systems may encounter technical challenges, such as lag, resolution issues, and limited interoperability between different software platforms. These limitations can hinder the seamless integration of VR into the design process.

TOOLS AND SOLUTIONS

Thanks to several innovative solutions, designers can now tackle these challenges head-on. Virtual fitting, virtual construction and tailoring, 3D modeling, technical drawings, and material forecasting are becoming increasingly accessible. Several pioneering companies offer tools that are making VR and AR more accessible to fashion designers.

1. CLO3D



▶ **LEARN MORE**
ABOUT CLO3D

Image Source: The New School

CLO3D is a powerhouse in 3D garment visualization. It enables designers to create, simulate, and modify clothing designs in a virtual environment. Features like 3D simulation, layering, design edits, sewing, tacking, print layouts, and fit checks allow designers to bypass the need for physical prototypes. Animation runways offer an additional layer of realism, helping designers visualize how their creations move and flow.

2. MARVELOUS DESIGNER



▶ **LEARN MORE**
ABOUT
MARVELOUS DESIGNER

Image Source: nexttut.

Marvelous Designer is another leading tool, specializing in the creation of 3D digital garments. It allows designers to simulate fabric properties and visualize designs realistically, making rapid prototyping and design adjustments more efficient than ever.

3. BROWZWEAR



[LEARN MORE
ABOUT CLO3D](#)

Image Source: Trapdoor Creative

Browzwear's suite of 3D fashion design software offers a holistic approach to digital garment creation. VStitcher's 3D visualization capabilities enable consumers to virtually "try on" garments, reflecting their body shape and size accurately. This reduces shipping costs, minimizes returns, and enhances customer satisfaction.

Browzwear's digital twin technology allows designers to explore infinite variations of designs and share them instantly across their organizations, accelerating the time-to-market and ensuring the final product is a perfect match to the initial vision.

CONCLUSION

The integration of VR and AR in fashion design is still in its infancy but shows tremendous promise. As advanced design technology continues to seep through the world of fashion, we can expect the barriers to adoption to diminish, driving even more innovative applications. These technologies are enhancing creativity, improving precision, and making the industry more efficient, and eco-friendly. While challenges such as rapid technological advancements and initial setup costs loom, it's essential for brand and designers to understand these hurdles and equip fashion creatives with the knowledge to effectively leverage VR tools for their benefit. Start experimenting with VR technology today and witness the transformation in your creative process.

PART 2: ENHANCING BRAND STORYTELLING AND MARKETING

It's not too late to integrate VR strategies into your business!

Consider this your cue to explore how your company can jump on these trends, drawing on past successful examples to fuel growth and engage customers in fresh and exciting ways.



The mixed reality industries are experiencing rapid growth; currently, the AR industry specifically is valued at an impressive \$15 billion USD, with an anticipated annual growth rate of 31.5% through 2026! If that's not convincing enough, a recent Shopify study reveals virtual try-on tools can significantly boost sales by an impressive 40%!

In the first part of this blog series, we explored how VR and immersive technologies are reshaping the fashion industry from a production standpoint, starting from conceptualization and 3D sketching to prototyping and production. Now, in this second blog, we turn our attention to the consumer-brand interactions that VR is transforming, revealing the glamorous and most-discussed facets of fashion.



HOW DO CONSUMERS FIT INTO THE INTRICATE FASHION PRODUCT LIFECYCLE?

Today's retail world showcases remarkable innovation with the rise of VR headsets like the Apple Vision Pro and Meta Quest. These devices are turning passive scrolling into dynamic participation. Introducing a new era of connectivity, where brands and consumers can engage in novel ways such as virtual showrooms, immersive events, gaming experiences, and social media activations.

Pioneers like Mytheresa, J.Crew, E.L.F. BEAUTY, and Alo Yoga are leading the charge, crafting captivating fashion apps on the Vision Pro that transport shoppers to new dimensions through real-time product visualization and effortless social shopping. Meanwhile, Nike invites customers to digitally design their dream sneakers, Gucci provides virtual sunglass fitting rooms, and Zara elevates store experiences with AR magic. These innovations are unlocking powerful data insights, revealing a new dimension of use in such advanced technology.



KEY PROBLEMS IMMERSIVE TECHNOLOGY TACKLES

Before the rise of VR and AR, brands faced a significant hurdle—brought into sharp relief during the COVID era—as they struggled to engage audiences through traditional fashion shows and brick-and-mortar retail. Even with standard e-commerce, creativity and exposure felt stifled, fostering exclusivity instead of the desired inclusivity. For consumers, shopping without the ability to truly experience products often leads to frustration and the hassle of returns. Enter VR and AR technologies, which have revolutionized the landscape by offering immersive experiences that allow consumers to explore products virtually, erasing geographical barriers, and creating a more inclusive fashion world. Brands can now captivate a wider audience by hosting virtual fashion events and crafting interactive retail spaces, elevating both engagement and customer satisfaction.

MILESTONES IN THE ADOPTION OF VR IN FASHION

A few visionary brands have embraced VR technology, transforming conventional consumer experiences into captivating, interactive journeys. These leaders have ventured from the early days of virtual reality experiments to the forefront of the latest AR advancements, solidifying the fashion industry as a leader in digital innovation. While traditional in-store shopping offered tangible experiences, it lacked the dynamic engagement digital solutions provide. However, when basic e-commerce came along, although convenient, it didn't match the immersive depth that VR brings.

Enter virtual fashion shows—an ingenious evolution allowing global audiences to witness collections without geographical limits, elevating the fashion showcase to new heights. As virtual fashion shows gain traction, they offer unparalleled advantages to both brands and consumers. These digital runways reduce costs tied to traditional marketing, while simultaneously maximizing customer satisfaction. By displaying collections digitally, brands receive valuable feedback before production commences. This digital innovation empowers brands to present apparel through engaging 3D catalogs and virtual showrooms, animating 3D samples to capture intricate details and movement, thereby allowing consumers to interact with products like never before.

Immersive technology's applications in fashion are vast and varied. From pop-up shops and VIP rooms to quest-based games and VR marketing workshops, the possibilities are endless. Creative initiatives like virtual influencer collaborations, virtual concerts, game shows, and interactive giveaways further demonstrate the potential of VR and AR to redefine the fashion landscape. As fashion continues to evolve, the intersection of gaming and style presents exciting opportunities for creative expression and consumer interaction.

GAMIFIED FASHION FOR THE MODERN SHOPPER

Gaming has introduced a whole new avenue of consumer engagement models for fashion brands, enabling gamification tactics to transform shopping experiences into captivating adventures. By allowing consumers to dress avatars in the latest styles or explore virtual showrooms and integrating layers of game mechanics and rewards, brands are not only enhancing user engagement but also creating deeper brand interactions and generating incentives for a higher return rate. Moreover, gamification in fashion opens up new revenue streams through digital goods and virtual fashion items. As consumers invest in dressing their avatars with exclusive virtual collections, brands can capitalize on this trend by offering limited-edition digital fashion lines. This not only drives sales but also taps into the growing market of digital collectibles, appealing to tech-savvy consumers and early adopters. Another consideration is the potential for community building through gamified experiences. Brands can create vibrant online communities where fashion enthusiasts share their styled avatars, participate in virtual events, and engage in social interactions. These communities cultivate a sense of belonging and encourage user-generated content, amplifying brand reach and creating organic marketing opportunities.

Social media platforms are riding this wave, integrating VR to enable users to share their virtual fashion statements. Collaborations with influencers and the emergence of user-generated content are fueling vibrant digital communities that foster brand loyalty and engagement, changing how we perceive and participate in style culture. Beyond enhancing consumer experiences, VR and AR offer brands invaluable insights into consumer preferences and behaviors. Tools like AR virtual try-on capture detailed data on sizing, style preferences, and items tried, while VR showrooms track customization choices and time spent engaging. These insights empower luxury brands to deliver personalized shopping journeys and tailored recommendations, significantly enriching the consumer experience.

1 ZARA: AR MODELS

USE CASES



Image Source: Zara, Natalia Kulagina

Zara is leading this innovation with its AR Models campaign launched in April. Digital models came to life in vacant shop windows, replacing traditional mannequins with a tailored shopping experience. Customers could use the Zara AR app on iOS and Android to activate digital projections of models in select stores. An intriguing feature allowed users to view holograms of models Léa Julian and Fran Summers wearing their purchases by simply hovering their phones over a package in-store. This positions Zara at the height of fashion technology, reaching audiences beyond their typical shoppers.

2 LOUIS VUITTON: YAYOI KUSAMA

In a similar vein, Louis Vuitton's 2023 collaboration with artist Yayoi Kusama highlights the compelling power of AR in brand storytelling. Through [Snap Inc.](#)'s Landmarker Lenses, the luxury brand virtually adorned iconic landmarks such as the Eiffel Tower and

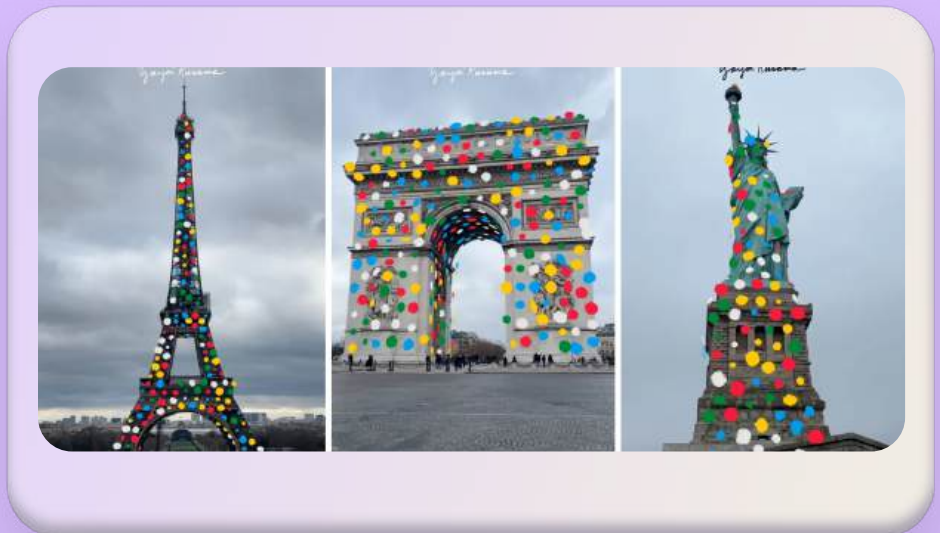


Image Source: Hypebeast

the Statue of Liberty with Kusama's signature polka dots. This project crafted a captivating narrative bridging the digital and physical worlds, showcasing how AR can create interactive, memorable experiences that deepen customer engagement and foster emotional connections with the brand.

INSIGHTS

ROEI DERHI

FOUNDER OF PLACEBO FASHION HOUSE

At the heart of this transformation is the ability of VR to offer a more intimate, personalized experience that transcends traditional fashion boundaries. For instance, PLACEBO, a high-end Metaverse fashion house founded in Sweden, has been at the forefront of this digital shift. When asked about the impact immersive technology has on the fashion industry, PLACEBO's Founder and Creative Director, Roei Derhi, said:

In partnership with Parade Studio, PLACEBO launched its Mother of Pearl collection, showcased through a VR experience on Oculus. This project highlights VR's potential as a powerful medium to immerse audiences in a fashion narrative that transcends the physical realm, offering an experience that feels larger-than-life.

— “ —

Fashion is all about storytelling and creating experiences that are inherently social—we wear fashion to be seen and to express ourselves. VR, by contrast, is a more intimate and individual experience for now. While it's not yet fully optimized for social interaction, VR holds tremendous potential for storytelling that transcends reality.

— ” —



Image Source: PLACEBO Fashion Brand

Despite its potential, Derhi also brings to attention that integrating digital fashion poses challenges, particularly for traditional brands. Fashion, which is supposed to embody agility and forward movement, has been slow to adopt new technologies. Traditional brands often hesitate to venture into the digital world. However, the emergence of digital-native brands, like PLACEBO, points to a future where fashion is better aligned with the digital age.

ZOHA KHAN

FOUNDER CULT ALARA, DESIGNER, AND ILLUSTRATOR

Driving this innovation is Zoha Khan, a digital fashion educator, designer, illustrator, and the founder of the digital fashion brand Cult Alara. Her brand, Cult Alara transforms garments into art. Where each piece is a timeless heirloom, embodying rich heritage through modern innovation with digital pieces like headgear, cuffs, collars, cover-ups, and bags.



Image Source: Zoha Khan

Khan notes that although complex designs can be challenging to convert for VR/immersive technology use, VR allows designers to

explore unconventional forms like floating elements and gravity-defying textures. When it comes to engaging audiences through immersive technology, Khan emphasizes creating unique experiences through virtual showrooms, virtual fittings, try-on experiences, and AR & VR filters as effective methods for marketing digital products.

Looking to the future, Khan envisions a polyglot industry where gaming, fashion, music, and film collectively engage young fashion consumers. "Trends will range across these industries and will be highly reliant on new tech releases, as they will help shape user interaction and push creative possibilities," she predicts. She also believes that younger consumers' interest in sustainability and personalized experiences will drive brands to offer more eco-friendly, custom fashion experiences facilitated by AR/VR.



Image Source: Zoha Khan

— “ —
I believe a 360-degree immersive experience fashion film not only helps translate the product story and process perfectly but also creates a memorable experience for the audience.
 — ” —

COMMON CHALLENGES IN IMPLEMENTING VR STRATEGIES

Despite the benefits, brands face challenges such as high initial costs, technological barriers, and the need for consumer education. Nonetheless, innovations in VR headsets, like Apple's Vision Pro and Meta's cost-effective Quest 3S, are making these technologies increasingly accessible.



Image Source: SYKY

TOOLS FOR IMPLEMENTING VR STRATEGIES

The affordability of the Meta Quest 3S allows more people to experience mixed reality, likely prompting brands to develop immersive activations and experiences within these virtual worlds. This shift opens new paths for marketing, virtual events, and interactive content. The development of the Orion prototype further indicates a strategic move toward more integrated, lightweight devices, prioritizing user-friendliness and the seamless integration of physical and virtual

worlds. This trend is further emphasized by the recent release of [Snap Inc.](#)'s new glasses, underscoring an industry-wide focus on wearables that blend style, convenience, and state-of-the-art technology.



Image Source: Meta

CONCLUSION

The fashion industry's venture into VR is just beginning. As brands continue to innovate and integrate VR into their marketing strategies, they create more engaging, sustainable, and consumer-friendly experiences. For brands and consumers alike, VR is opening new dimensions in fashion storytelling.

I invite you to engage with as many brand VR experiences as you can and encourage brands to continue pushing boundaries in this space. If you're eager to explore how VR can revolutionize creativity in fashion, I'd love to hear your thoughts and ideas for my next blog. DM me with your insights, and let's shape the future of fashion together.

ABOUT

OLIVIA LEE is an insightful strategist immersed in the metaverse, shaping the future of fashion, beauty, and lifestyle in the digital universe, and championing women-led initiatives.

LIVVIUM bridges the digital frontier, guiding brands through immersive commerce, metaverse exploration, and Web3 thought leadership to thrive in tomorrow's connected world.

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