

B8604

New Frontiers in Retailing: Magic and Logic

The Future of the Virtual Mall

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The Future of the Virtual Mall

Hypotheses

- The Metaverse will consist of multiple platforms.
- The Metaverse will remain largely decentralized.
- There will be a reverse creation of products, from digital to reality.

Supporting Arguments

- Separate platforms have already been created, and tech companies have begun developing software to bridge these distinct virtual worlds.
- Blockchain is expected to become one of the key technologies of virtual spaces, which is inherently decentralized.
- Major fashion labels are entering the Metaverse with a merged-reality approach, where digital collections made up of virtual-only garments are being produced before they exist in physical form.

Challenges

- Meta founder and CEO Mark Zuckerberg announced a \$10 billion plan to develop one streamlined Metaverse.
- Corporate goliaths such as Meta, Apple, and Microsoft will work to position themselves at the center of the Metaverse in an attempt to shape it in their own image.
- Luxury brands have a tight grip on their brand image and adjacencies, coupled with a massive amount of money to enter into and win legal battles.

Executive Summary

The Metaverse generally refers to the idea of a shared virtual space, akin to a digital mirror of the real world—but without any of the constraints. Through offering unprecedented access and total immersion to consumers, the Metaverse creates a sort of virtual “third space.” Rather than shopping through a specific retailer’s website, imagine rendezvousing with a friend in a Minecraft-like world to walk around and shop at digital storefronts. Spurred by the Covid-19 pandemic, virtual worlds are fulfilling the functions of physical shopping malls more than ever before. As a result, market analysts project that the Metaverse will grow at a compound annual growth rate of 13.1% over the next few years, eventually making it a multi-trillion-dollar industry.

With this in mind, combined with the \$3T fashion industry, the implications of a virtual commercial world are massive. For example, in 2019, digital fashion house The Fabricant garnered headlines for selling a \$9,500 dress through the Ethereum blockchain that could only be “worn” digitally, i.e., edited onto the owner’s avatar in post-production. In this paper, we will expand on these implications and explore our predictions for the future of the virtual mall operating within the Metaverse. Each of these hypotheses explore the risks and opportunities that are presented as consumers are pushed toward the virtual mall:

Hypothesis I: The Metaverse will consist of multiple platforms.

Hypothesis II: The Metaverse will remain largely decentralized.

Hypothesis III: There will be a reverse creation of products, from digital to reality.

Introduction

Virtual goods, initially popularized by gamers, have since entered the worlds of fashion, real estate, and art to become a \$190B market. As virtual worlds become more popular, brands are seeking opportunities in purely digital plays as they strive to attract a generation of digital natives. For one in three Generation Z respondents surveyed by Pew, the digital identities make them feel their “most authentic” selves. By setting up shop within the Metaverse, fashion brands can reach millions of these younger consumers from a single virtual store. From such a store, they can offer products that allow Gen Z shoppers to experiment with their different “selves” and wear styles that might not be practical in the physical world.

According to a Kantar consumer insights survey published in 2021, nearly 75% of Gen Z shoppers have purchased a digital item within a video game and 60% of these young shoppers think that brands should sell their products on Metaverse platforms. However, not all consumers are clear on how the Metaverse is defined: just over half (53%) of respondents said they are very or somewhat familiar with the term “Metaverse,” indicating that retail brands will need to establish clear messaging when it comes to describing their Metaverse offerings to consumers.

Hypothesis I

Based on current industry trends, the future of the Metaverse will consist of a multitude of separate platforms and domains. Just as the current internet has a collection of logins, domains (.com, .org, .edu, etc.), and varying payment options, the Metaverse will represent a fragmented virtual experience. Large tech corporations such as Fortnite and Roblox have already created separate virtual worlds, which are likely to continue existing in tandem due to the massive, loyal consumer base both brands have individually garnered. Moreover, the UK tech start-up Improbable has already begun developing a cloud platform called SpatialOS that would enable thousands of players across multiple platforms to join a single, virtual experience with increased

levels of simulated content. With this innovation, tech firms would feel decreased pressure to merge with other companies and continue building separate platforms in their own images.

Granted, industry leaders such as Mark Zuckerberg have significant and extensive plans for the future of the platform. At the Facebook Connect conference in October of 2021, Zuckerberg announced that Facebook would be changing its name to Meta, confirming the company's future investment in the new digital world. Through Zuckerberg's leadership, Meta has pledged to spend \$10 billion within the year on the development of a unified Metaverse that "seamlessly blends with the real world." While the Metaverse is likely to remain spread across multiple platforms, companies such as Fortnite and Roblox should be mindful of the power and influence Meta has to achieve their goal of a unified Metaverse.

Hypothesis II

Regardless of the number of platforms the Metaverse will have, the concept of the Metaverse will play an important role in the future. While tech incumbents such as Meta, Apple, and Microsoft will attempt to create a monopoly within the virtual reality industry, we predict that the Metaverse will remain largely decentralized. The prime driver of a decentralized Metaverse is blockchain's role in it; specifically, blockchain is expected to remain one of the key technologies behind the development of virtual spaces, allowing the Metaverse to inherit its cornerstone values of security, censorship resistance, and decentralization. In fact, the blockchain technology sector is projected to grow by 32.4% until at least 2025. Currently, a range of blockchain-based, decentralized virtual platforms such as Decentraland and Bloktopia are in development and have major technical advantages over corporate-backed offerings through remaining truly permissionless and democratic.

Though the current pervasiveness and continued growth of blockchain technology is encouraging, corporate goliaths such as Meta, Apple, and Microsoft will work to position

themselves at the center of the Metaverse in their attempts to shape it in their own image. Namely, these corporations will venture to expand their business models built off of the centralized collection of user data into the virtual universe, making it difficult for regular end-users to verify exactly who has access to their data and under what conditions.

Hypothesis III

The Metaverse presents a unique opportunity for fashion houses to attract a sizable untapped market segment with little risk of cannibalizing their physical inventories. The introduction of digital-first products has led to a re-engineering of retail's classic product development and production cycles. For instance, launching a product in a virtual store could garner consumer feedback and provide data to project demand for a physical version of said product. Unsurprisingly, luxury fashion houses such as Gucci and Dolce & Gabbana are making concerted efforts to embrace these merged-reality opportunities and gain brand awareness in this market. In 2021, Gucci showcased Gucci Garden, their first ever virtual pop-up on Roblox. Within the virtual experience, 20 million visitors were able to buy exclusive, limited edition avatar items, yielding hundreds of thousands of purchases, among which was a \$400k purse. Dolce & Gabbana followed suit with its Fall 2021 Alta Moda show, unveiling its nine-piece *Collezione Genesi* collection, whereby half of the designs were "virtual-only" and each piece was attached to an NFT.

While the digital world presents immense opportunities for brands, such opportunities will continue to require substantial investment. Another challenge brands are likely to face in the digital world surrounds preserving brand identity. Hermes notably sued a digital artist for knocking off its iconic Birken handbag for trademark infringement and dilution. Ensuring proper brand preservation in these decentralized spaces will require careful investment into legal analyses and copyright structuring.

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Supporting Arguments

Risks & Challenges

Hypothesis 1

The Metaverse will consist of multiple platforms.

- Companies such as Fortnite and Roblox have already created two separate virtual worlds
- Software development unicorn Improbable is developing SpatialOS, a cloud platform that allows games to support up to 20,000 players in another seamless world

- Meta's interest in dominating the Metaverse — at the Facebook Connect conference in October of 2021, Meta founder and CEO Mark Zuckerberg announced plans to spend \$10 billion within the year on the development of the Metaverse

Hypothesis 2

The Metaverse will remain largely decentralized.

- Blockchain is widely expected to become one of the key technologies enabling the development of a truly pervasive virtual space
- A range of democratic crypto-native social media platforms and Metaverse projects (Decentraland and Bloktopia) have a major head-start over corporate-backed offerings

- Corporate goliaths (Meta, Apple, Microsoft) with shareholders to please will work to position themselves at the center of the Metaverse in their attempts to shape it in their own image

Hypothesis 3

There will be a reverse creation of products, from digital to reality.

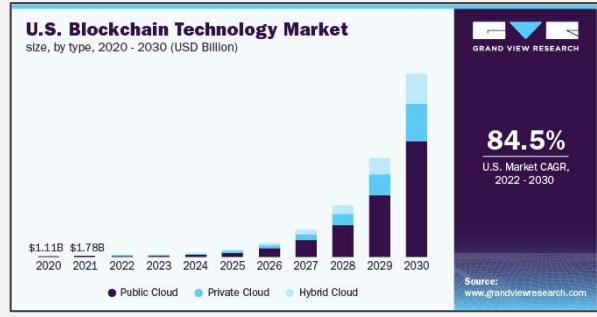
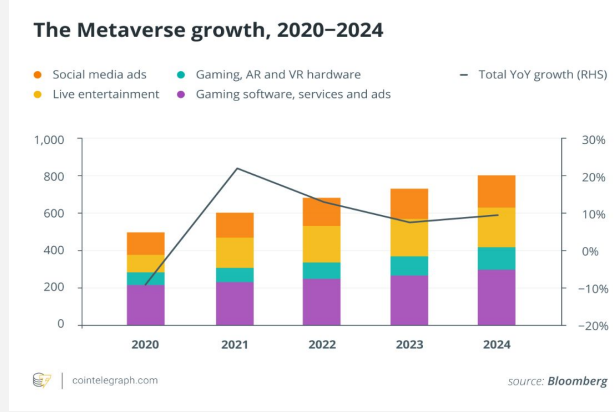
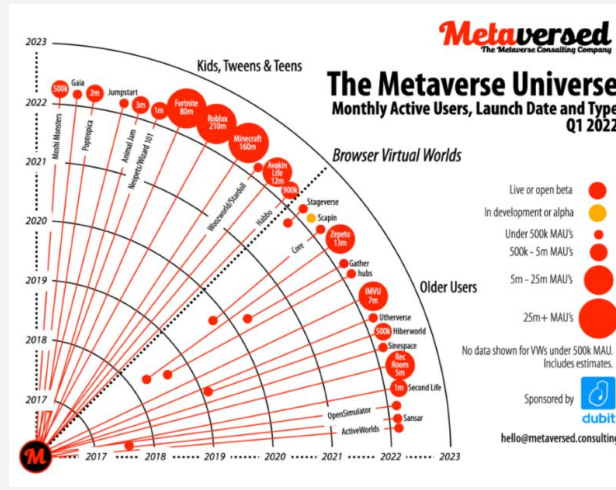
- Luxury brands such as Gucci and Dolce & Gabbana are entering the Metaverse with a merged-reality approach, launching virtual-only products to be worn on virtual avatars and/or attached to NFT's before they exist physically

- Investment required to upkeep digital presence

- Tight grip that brands (Hermes) have on their brand image and adjacencies, coupled with the mass amount of money required for copyright infringement lawsuits

Elevator Pitch

The Metaverse is poised to drastically change within the next decade. In the coming years, our team predicts that a largely decentralized Metaverse consisting of multiple platforms will instigate the reverse creation of products, from digital existence to physical reality. However, tech incumbents such as Meta, Apple, and Microsoft will challenge the current structure of the Metaverse in their attempts to create a monopoly and shape it in their own image.



EDUCATION**COLUMBIA BUSINESS SCHOOL**

New York, NY

MBA, May 2023

GMAT: 740

2021-2023

Leadership: Chief of Staff, Cluster D; AVP of Conference, Retail and Luxury Goods Club*Member*: Columbia Women in Business, Latin American Business Association, Retail and Luxury Goods Club, Wine Club, Gourmet Club, Snow Sports Club**UNIVERSITY OF PENNSYLVANIA**

Philadelphia, PA

BA, Communications, May 2017

GPA: 3.7

2013-2017

Minor: Consumer Psychology*Honors*: magna cum laude, Dean's List*Leadership*: Vice President of Public Relations, Delta Delta Delta (January 2014-May 2017); Captain, Club Cross Country (September 2014-May 2015); Mentor, Ben Connect Mentorship Program (August 2020-present)*Study Abroad*: King's College London, Fall 2015**EXPERIENCE****BLOOMINGDALE'S**

New York, NY

Associate Planner (2020-2021)

2017-2021

- Developed strategic financial plans for \$40M business sold across department stores nationwide, actively adjusting forecasts based on market conditions to achieve sales and gross profit goals.
- Built \$60M budget for 30 brands across 35 stores and digital platform through developing quarterly sales forecasts spanning 100K+ products, consistently achieving forecast accuracy of 90%.

Senior Assistant Planner (2019-2020)

- Maximized business in-season using product performance analysis, open-to-buy (OTB) reporting, and markdown management, advising buying partner on necessary course corrections.
- Grew business by 8% in 2020 through strategic financing and re-allocation of stock from brick-and-mortar stores to e-commerce warehouse, reacting to shift in consumer spending in the wake of COVID-19.
- Promoted two years faster than peer group.

Assistant Buyer (2018-2019)

- Partnered with digital marketing to launch four key trending brands through utilizing the seasonal printed and digital catalogue, resulting in \$4.5M sales growth
- Managed rolling operating financial forecast (OTB) jointly with Senior Buyer to secure gross margin growth in-season
- Implemented strategic assortment modifications using location sales analysis based on regional productivity thresholds

Junior Buyer (2017-2018)

- Assisted Senior Buyer in curating hyperlocalized assortments for \$90M denim department across 35 stores, representing 15% of total company ready-to-wear sales volume
- Utilized insight from consumer intelligence data to identify and target core customers with tailored promotional pricing strategies, effectively increasing sales and customer loyalty

ZETA GLOBAL

New York, NY

Digital Marketing Intern

Summer 2016

- Leveraged industry-leading AI and BI to develop, analyze, and report on social media campaigns with the goal of increasing brand awareness and driving customer acquisition for clients
- Employed digital advertising trends to determine customer intent and needs

ADDITIONAL INFORMATION*Volunteer Work*: Fundraising member, Stepping Strong (January 2014-present); Boston Marathon participant, Stepping Strong Team (November 2019-present); Volunteer, Project Sunshine (April 2020-present)*Languages*: Latin (Advanced), French (Beginner)*Interests*: Running; traditional Mexican cooking; British comedy shows; classical art; translating Latin

EDUCATION**COLUMBIA BUSINESS SCHOOL**

New York, NY

MBA, Entrepreneurship and Venture Capital, May 2023

2021-2023

Honors: Columbia Venture Fellow, Dean's Academic Excellence*Leadership:* Co-President of Health & Wellness Club, VP of Treks for Venture Capital Club, VP of Social for ClusterQ (LGBT)**FORDHAM UNIVERSITY, GABELLI SCHOOL OF BUSINESS**

New York, NY

BS, Finance and Alternative Investments, May 2015

2011-2015

Honors: Manresa Scholar, Dean's Honors List, Dean's Award for Best Integrated Project, Gabelli Student Leader Award*Member:* Finance Society, Omicron Delta Epsilon (Honors Economics Society), Varsity Men's Crew Team (NCAA Division I)**EXPERIENCE****COSMIC VENTURE PARTNERS**

New York, NY

MBA Investment Associate

2022-Present

- CVP invests in early-stage consumer tech, web3, and CPG-health and wellness focused start-ups

ANDREESSEN HOROWITZ

New York, NY

MBA Portfolio Operations Mentor

2022-Present

- Partnering with one of the a16z TxO Fund's portfolio companies to identify gaps and growth opportunities as well as define KPIs, build progress tracking tools, and drive overall growth to ensure fund success

COLUMBIA VENTURE FELLOWS PROGRAM

New York, NY

MBA Venture Capital Fellow

2021-Present

- Partnering with Imaginary Ventures to write an investment thesis on 'Gaming & the Metaverse'
- Sourcing Web3.0 deals for Imaginary Ventures that span Direct-to-Avatar, Gaming, and Immersive Experience
- Conducting diligence on CBS alumni start-ups that have applied for Lang Center funding; 3 memos completed

BROMA INC.

New York, NY

Dark chocolate almond butter consumer packaged goods company.

2019-2021

Co-founder and Chief Financial Officer

- Fundraised \$500K in a Friends, Family, and Angel round; wrote term sheet and led monthly investor updates
- Managed P&Ls while executing pricing analysis to ensure operational efficiency, \$100K annual sales
- Led sales development while maintaining retailer account and distributor relationships to enable growth; 100+ retail sites
- Managed growth marketing efforts to meet KPIs through direct marketing channels; 26% returning customer rate

DELOITTE CONSULTING, LLP

New York, NY

Senior Consultant (2020-2021)

2015-2021

- \$34B Global Insurance Company: Led redesigning the sales distribution strategy by identifying the current cost of customer acquisition, future state roadmap, and financial impact modeling; resulting in \$185M net annual savings YoY

Consultant (2017-2020)

- \$790B Global Investment Manager: Identified the current customer experience and led prototyping workshops to create a product MVP; resulting in the development of a VR investment analysis tool and the launch of an experience center for investors

Business Analyst (2015-2017)

- \$945B Global Insurance Company: Developed a market study assessment benchmarking the client's internal management reporting practices and facilitated a workshop bringing together the firms' c-suite; resulting in a roadmap for a reorganization

SELECT INTERNAL DELOITTE FIRM LEADERSHIP ROLES (2015-2020)

- **GLOBE (LGBTQ Employee Resource Group) Program Manager:** Managed a team of 14 consultants, supporting the Chief Inclusion Officer, focused on firm DEI community building, market impact, and workforce retention
- **AdvisorConnect, a proprietary Deloitte Consulting asset that enabled wealth managers omnichannel access to their clients**
 - **Functional Lead:** Developed the monetization strategy of the asset and managed business development efforts
 - **RPA Lead:** Managed 10 developers dedicated to UiPath code build, maintenance, and future product enhancement

ADDITIONAL INFORMATION*Certifications:* Anaplan Developer, Automation Anywhere AI Software, Bloomberg Essentials, FactSet, Salesforce Admin*Volunteer:* Board Member of the CUNY LGBT Advisory Council, Engagement Chair for NGO OutRight Action International*Interests:* Accomplished Tubist performed at Carnegie Hall, Lincoln Center, Rockefeller Plaza with the New York POPS

EDUCATION**COLUMBIA BUSINESS SCHOOL****MBA**, Retail & Technology, Strategy & Operations, May 2023

New York, NY

2021-2023

Leadership: Vice President of Community, Retail Luxury Goods Club*Member*: Technology and Data Analytics Club, Media Management Association, Retail Luxury Goods Club, Small Business Consulting Club, Entrepreneurship Club, Venture Capital Club, Latin American Business Association, Snow Sports Club*Relevant Coursework*: Business Analytics, Strategy Formulation, Operations Management, Supply Chain Management, Managerial Statistics, Entertainment Marketing, Introduction to Product Management, Innovation Salon, Foundations of Retail, Frontiers of Retail**UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA)**

Los Angeles, CA

BA, Global Studies, March 2015, *Honors*: Dean's List

2011-2015

Leadership: Lead Mentor, Early Academic Outreach Program; Campus Ambassador, Deloitte & Touche*Study Travel Program*: London, Madrid, Paris*Internships*: Deloitte & Touche (2015), BlazeNow (2016)**EXPERIENCE****RAMSET AUTOMATIC GATE SYSTEMS, INC.**

Los Angeles, CA

Ramset is a middle-market manufacturer of automatic gate operators and controlled access systems (gross sales of \$11M in FY 2020)

2019-2021

Chief Operating Officer (2019-2021)

- Led and managed various internal cross-functional departments and external groups in the 8-month development and launch of a new ETL (National Research Testing Lab) certified product line securing \$200k of pre-orders and recouping 12% of lost market share; responsibilities included: designing and implementing rapid prototyping processes, developing a go-to-market strategy, and re-negotiating a \$500k contract with the lead project engineer
- Identified and piloted new revenue stream to increase machinery utilization and thus decrease overhead cost allocation on a unit level, contributing nearly \$85k of revenue during first year of operations
- Collaborated with Technology, Purchasing, and Production/Warehouse departments to update and digitize bill of materials (BOMs) of existing product line and generate BOMs for new product line requiring the development of a new part identification and organizational system; enabled the implementation and integration of new management inventory software yielding over \$75k in annual direct material cost savings
- Increased daily production output by nearly 40% by identifying bottlenecks and collaborating with internal Technology, Quality Control, and Packaging departments to upgrade and re-staff Quality Control and Packaging stations
- Increased daily production output by nearly 40% by identifying bottlenecks, resolving supply chain inefficiencies (domestic and international), restaffing various internal departments, and upgrading Quality Control and Packaging stations
- Led company-wide data centralization reform to reduce data redundancy and integrate inter-company databases; developed bottom-up financial forecasting models

DELOITTE & TOUCHE

Los Angeles, CA

2016-2019

Senior Associate, Audit & Assurance (2018-2019)

- Developed and implemented project optimization tools to manage upward and downward workstreams for firm's largest Financial Services engagement (12 component SEC filing entities), leading to a 15% reduction in concurrent SEC filing time
- Collaborated with cross-functional teams to develop analysis over 'high risk' assumptions pre-revenue private equity investments

Associate, Audit & Assurance (2016-2018)

- Hand selected by partner to work on ad-hoc engagement: Drafted memo analyzing company's long-term viability, developed accompanying sensitized solvency analysis to support client's \$150M capital re-structuring

ADDITIONAL INFORMATION*Certifications*: California Certified Public Accountant (CPA)*Volunteer Work*: Board of Director & Treasurer, The Center for Professional Services, Fellow & Career Mentor, Riordan Programs*Languages*: Spanish (Fluent), Mandarin Chinese (Elementary)*Skills*: AutoCAD, Fusion 360, AP100US, Tableau, Conjoint Analysis, Excel Data & Statistical Analysis (Regression and Modeling), SQL (Basic), Bloomberg Terminal*Interests*: Rollerblading Through Venice Beach, Augmented Reality Retail Capabilities, Meditation & Mindfulness, Vegan Cooking Tutorials