



The Metaverse's Growing Pains — Where Do We Go From Here?

FTI Consulting: Metaverse Credentials and POV Discussion



The metaverse has gone through a massive hype cycle, both consumer- and investment-led, in the last 18 months

This is not unique when considering transformative concepts and is arguably a good way to apply technological Darwinism

Now is a good time to get REAL and assess the next stage of the evolution of the metaverse



While the initial hype has died down...

- The shift in consumer behavior has begun
- 2 Businesses continue to experiment and are already identifying where value can be created
- 3 Tech funding and venture investment on substantive projects remain high

To identify true opportunities, we need a datadriven approach to separate myths from realities





Part 1: Getting Real — What's the State of Play?

Insight #1: Customer Perspectives



PART 1: GETTING REAL — WHAT'S THE STATE OF PLAY?



PART 2: WHAT IS REAL, WHAT IS NOT — WHAT DOES THE DATA TELL US?





Although Metaverse Awareness is Increasing, Enthusiasts Remain a Small Portion of the Population



Metaverse Awareness Survey Question: Are you aware of the concept for a new set of digital experiences called the metaverse? **Segment Definitions:** *Curious* individuals have little participation currently in the metaverse, but will probably engage in the future either through NFTs or experiences; *Aspirational* individuals currently participate in some metaverse experiences and are likely to continue participating in the future; *Enthusiasts* currently participate in a variety of metaverse experiences, have purchased NFTs and are very likely to engage in metaverse activities in the future.



New Consumer Use Cases and Paradigms are Some of the Fundamental Shifts that are Taking Place as a Result of the Metaverse

VIRTUAL IDENTITY & PRESENCE

Meaning of personal identity is changing as people spend more time in virtual worlds. Money spent on in-game cosmetics shows users value virtual appearance.

VIRTUAL TRIBES & SOCIETIES

Nature of social relationships, norms and group behavior changing and adapting to virtual spaces.

DIGITAL PARTICIPATION

Nature of interactions is evolving, becoming more persistent and perpetual. Connections to others are made across multiple devices.

CREATOR-CONSUMER CONVERGENCE

Blurring of creation and consumption paterns. Users creating experiences as part of the experience itself.

DIGITAL OWNERSHIP

Economics of acquisition and value creation with digital objects is changing. NFTs and similar technology allow consumers to own and transact digital goods.

BEHAVIORAL TWINNING

Crossover emulation between physical and digital behavior. Concerts, events, hangouts going digital.



Exploration and the Ability to Create are Key Drivers of Consumer Interest in the Metaverse...

WHY ARE YOU INTERESTED IN PARTICIPATING IN THE METAVERSE?

(% of respondents, n=780)



Segment Definitions: *Curious* individuals have little participation currently in the metaverse, but will probably engage in the future either through NFTs or experiences; *Aspirational* individuals currently participate in some metaverse experiences and are likely to continue participating in the future; *Enthusiasts* currently participate in a variety of metaverse experiences, have purchased NFTs and are very likely to engage in metaverse activities in the future.



... While Monetization Ranks Lower in Terms of Importance; Social Interactions Remain Relevant, Especially for Metaverse Enthusiasts

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Consumer intent has not yet fully translated to sustained commercial activity



Despite Virtual Land Sales as an Early Indicator of Potential Consumer Interest, all Major Projects Have Seen Steep Declines in Value





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Source: Coin Telegraph, OpenSea

... and Growth in MAUs, and Revenue for Fortnite and Roblox, Have Been Positive but Slowing as Consumer Interest Matures After the Initial Hype

FORTNITE REVENUE (BILLIONS) AND MONTHLY ACTIVE USERS (MILLIONS)

ROBLOX REVENUE (BILLIONS) AND MONTHLY ACTIVE USERS (MILLIONS)







Source: Business of Apps, Pocket Gamer

The Future Can Take a Long Time to Arrive: Smartphone Sales Growth may Foreshadow the Adoption Trajectory of the Metaverse

SMARTPHONE UNIT SALES (Millions)



Notes: Proto-smartphone brands include S60, Palm, RIM, Windows phone *Source: IDC, Company websites*



The metaverse is still in a nascent stage, especially in terms of consumer adoption Continued technological development and corporate investment are likely to drive an increase in the number of use cases and therefore consumer involvement and participation





Part 1: Getting real — What's the State of Play?

Insight #2: Corporate Perspectives



PART 1: GETTING REAL — WHAT'S THE STATE OF PLAY?



PART 2: WHAT IS REAL, WHAT IS NOT — WHAT DOES THE DATA TELL US?





Corporations are Beginning to Explore the Metaverse with Four Key Domains in Mind



Notes: ¹Human capital metaverse refers to the opportunity to teach and develop individuals through specialized training opportunities in the metaverse; ²Industrial metaverse refers to the development, testing and organization of industrial processes in a simulated world to assess and improve productivity *Source: FTI Consulting Research and Analysis*



In Charting Their Paths in the Metaverse, Corporations are Making Strategic Choices on Where to Participate

THE METAVERSE "LAYER CAKE" (Illustrative / Non-exhaustive)





Tech Companies Have Been Approaching the Metaverse from a Variety of Angles, Ranging from Investment to Development Tools to Filing Patents for Future Growth





Retailers and Brands Have Been Early Adopters of the Metaverse, but to Extract Maximum Value, a Holistic Metaverse Strategy is Required





Consumers Want a Cohesive Experience on Mature Platforms Vs. a Fragmented Set of Walled Gardens

If each of the following types of organizations offered its dedicated version of the metaverse with associated experiences and content, which would you consider using?



Millennials & Gen Z (% of respondents, n=507)

Gen X & Older (% of respondents, n=250)



Source: FTI Consulting Annual Gaming Survey, January 2023

Building the right experiences and tools to realize the ultimate vision of the metaverse and consumer adoption will require significant investment

Both strategic and financial sponsors are deploying capital to accompany the development of various components of the metaverse value chain





Part 1: Getting real — What's the State of Play?

Insight #3: Investment Perspectives



PART 1: GETTING REAL — WHAT'S THE STATE OF PLAY?



PART 2: WHAT IS REAL, WHAT IS NOT — WHAT DOES THE DATA TELL US?





Investment Started with the VC and Tech Communities and Has Now Spread to Blue Chips and Consumer Goods Brands

(Non-exhaustive)

							(Non-exhaustive)
	Meta	Qualcomm	Alphabet	Sony	Walmart	Disney	Sotheby's
STRATEGIC				Microsoft			
	Unity	Verizon	SK group	Amazon	Niantic	Dapper	Warner Bros.
	Nvidia	AT&T		Alibaba group	Take-two	Epic games	Animoca brands
				Tencent			
	Sequoia	BlackRock		SoftBank group		Eight roads	
	Mubadala	White Star Capital		Andreessen Horowitz		Tioga capita	l
FINANCIAL	Eden Block	BainCapital		Blockchain capital		Indico Capital partne	ers
FIN	Paradigm	10T holdings		Plutusvc			
				Gumi Cryptos			
				Libertus Capital			
	•	— Technology		1	E	xperiences —	•



The Metaverse Has Seen Significant Investment Since 2016 Across all Layers, with Outsized Investment in the Experience and Technology Layers





Access Layer: While Deal Count in the Access Layer Has Been Steadily Low Over the Past 7 Years, Deal Volume is Driven by a Few Large Transactions



AVERAGE (\$M) AND TOTAL (\$M) DEAL VOLUME (2016 - 2022)

Average deal volume	19.5	5.3	28.0	21.1	14.6	54.5	48.9
Augmented Reality Glasses						2,450	
Virtual Reality Headsets						244	
Immersive Reality Accessories			1,231	1,204			1,468
Holographic Displays	974		104	159			135
	106				761	2.079	
	014	308	1.042	814	146		1.205
	814				459		
	<mark>1044</mark>	118	<mark>59</mark> 26	164	139	64 64	
	2016	2017	2018	2019	2020	2021	2022

Note: Information displayed based on closed deals in the metaverse space *Source:* Pitchbook, FTI Consulting Research and Analysis



Experience Layer: Historically, IoT Has Shown the Highest Funding Activity in Terms of Both Deal Number and Value

EXPERIENCE LAYER: NUMBER OF DEALS (2016 - 2022)



AVERAGE (\$M) AND TOTAL (\$M) DEAL VOLUME (2016 - 2022)



Note: Information displayed based on closed deals in the metaverse space **Source:** Pitchbook, FTI Consulting Research and Analysis



Technology Layer: Driven by the Exponential Rise of Interest in NFT and DeFi, Technology Has Attracted Significantly Larger Investments Since 2020

TECHNOLOGY LAYER: NUMBER OF DEALS (2016 - 2022)



AVERAGE (\$M) AND TOTAL (\$M) DEAL VOLUME (2016 - 2022)

Web3 Blockchains NFTs	1.2	me in Web3 seg 2.6 me in N&C seg	5.7	3.4	3.8	9.0	9.9
Smart ContractsDAOs	37.3	16.9	12.6	30.2	81.3	38.6	35.8
Digital IdentityDecentralized Finance					10,731 221	11,348 227 2,132	0.050
Networking Photonic Computing				2 0 0 0	1.215 822 462	2,132 2.786	8,053 667 2.532
Satellite InternetData Center Optimization	2,997 2.283	2,007 580	1,907 157 478	3,988 1,479 737	7.637	2.165 1,511 887	1,154 1,417
IoT NetworkingSemiconductor Design & Pack.	209 223 2016	812 332 2017	744 2018	875 2019	2020	1,175 2021	967 2022

Note: Information displayed based on closed deals in the metaverse space **Source:** Pitchbook, FTI Consulting Research and Analysis



There is a Direct Correlation Between the Stage of Development of a Metaverse Layer and the Potential Risk and Returns of Investment in it



TOTAL RAISED (\$BN) BY COMPANIES WITH 3+ DEALS FROM 2016 to 2022



Note: Information displayed based on closed deals in the metaverse space. 1) Analysing companies with pre-money valuation >\$10m **Source:** Pitchbook, FTI Consulting Research and Analysis

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The Enterprise and Network & Computing Segments are the Most Mature Layers with the Least Investment Risk and Shortest Investment Horizon

	Low / Short High / Long	Layer Maturity	Investment Horizon	Investment Risk
1	ACCESS: IMMERSIVE HARDWARE Immersive Hardware is a challenging vertical due to advanced technological requirements, high capex needs and tough competition			
2	EXPERIENCE: ENTERTAINMENT The Entertainment segment can potentially exploit a large, still-untapped customer demand, pending stronger infrastructure and access hardware			
3	EXPERIENCE: ENTERPRISE The Enterprise segment is driven by companies craving to implement new solutions to boost productivity and efficiency and improve working conditions (e.g. WFH)			
4	TECHNOLOGY: WEB3 Web3 is a volatile segment with outsized participation, but with a low survivability rate in the medium to long term			
5	TECHNOLOGY: NETWORKING & COMPUTE Networking & Computing segment is mainly driven by strong demand for better infrastructure and is perceived as having safer returns in the medium to long term by investors			



As the Metaverse is Still in its Early Stage, Investors with a Long-term View and an Eye to Building "Segment Champions" are Likely to Drive M&A Activity

M&A MARKET DEVELOPMENT

The Enterprise segment is driven by companies craving to implement new solutions to boost productivity and efficiency and improve working conditions (e.g., WFH)

WIN-ALL CHAMPION ON THE STAGE

Consolidation around single players within certain sub-verticals to create a win-all champion at early industry development stage

INCREASING FOCUS ON RISK, RETURN & MATURITY

The M&A track record shows increasing investor focus on sub-verticals with a visible customer base, more tangible use cases and a well-defined positioning within the current and future metaverse ecosystem

INVESTOR TYPE & EXITS

Acquisition by a strategic investor is currently the most common exit path





Part 2: What Is Real, What Is not — What Does The Data Tell Us?

Insight #4: Is the Metaverse catering Only to younger demographics?



PART 1: GETTING REAL — WHAT'S THE STATE OF PLAY?



PART 2: WHAT IS REAL, WHAT IS NOT — WHAT DOES THE DATA TELL US?





Historically, the adoption of emerging technologies has been spearheaded by the younger, more tech-savvy generations

But data suggests that older generations are likely to engage with the metaverse at higher rates than initially anticipated



Historically, Older Generations Have Been Fast Followers in Adopting Emerging Technologies



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Metaverse Awareness and Participation Across all Generations Have Increased Significantly Year-Over-Year

MILLENNIAL & GEN Z AWARENESS

GEN X & OLDER AWARENESS



Yes, I am aware and I regularly spend time in a metaverse playing and/or attending virtual events

- Yes, I am aware, I have logged on and have attended an experience or played
- Yes, I am aware but have never played/attended an experience or logged on to a metaverse
- No, I am not aware of the metaverse

Survey Question: Are you aware of the concept for a new set of digital experiences called the metaverse? *Source:* FTI Consulting Annual Gaming Survey, January 2023



Interest in and Understanding of the Metaverse is Increasing Across All Generations, Even Among Gen X and Older Individuals

METAVERSE AFFINITY BY GENERATION



Notes: Segment Definitions: *Curious* individuals have little participation currently in the metaverse, but will probably engage in the future either through NFTs or experiences; *Aspirational* individuals currently participate in some metaverse experiences and are likely to continue participating in the future; *Enthusiasts* currently participate in a variety of metaverse experiences, have purchased NFTs and are very likely to engage in metaverse activities in the future, *Rejectors* are aware of the metaverse but don't participate and don't plan to in the future, *Unaware* individuals are unaware of the metaverse, although they may participate in some facet (e.g., have bought cryptocurrency or have played a P2E game.

Across Generations, the Metaverse's Social and Leisure Experiences Draw Similar Interest

Which of the following activities would you be interested in experiencing in the metaverse?



Millennials & Gen Z (% of respondents, n=757)

Gen X & Older (% of respondents, n=757)



Source: FTI Consulting Annual Gaming Survey, January 2023

Metaverse affinity and participation display similar characteristics to other emerging tech, with younger demographics adopting early and older demographics increasing engagement over time





Part 2: What Is Real, What Is not — What Does The Data Tell Us?

Insight #5: Does the Crypto Winter Marks the End of the Metaverse?



PART 1: GETTING REAL — WHAT'S THE STATE OF PLAY?



PART 2: WHAT IS REAL, WHAT IS NOT — WHAT DOES THE DATA TELL US?





Metaverse-adjacent innovations such as cryptocurrency and NFT projects have experienced declines in demand and price, exacerbated by recent scandals.

But, even through these headwinds, interest and participation in the metaverse remain.



Popularity of Crypto and NFTs Has Decreased from All-time Highs, but that Does not Mean the Metaverse is Over





WORLDWIDE GOOGLE SEARCH INTEREST FOR THE TERM "NFT"





There are Clearly Still Many Challenges from an Experiential Standpoint Across the Metaverse Ecosystem





Like all Emerging-technology Hype Cycles, the Initial Frenzy is Followed by a Phase of Maturity, Productivity and Improvements in Technology and Experience

BLOCKCHAIN & WEB3 HYPE CYCLE



Source: Gartner; https://www.gartner.com/en/newsroom/press-releases /2022-08-30-metaverse-web3-and-crypto-separating-blockchain-hype-from-reality



Interest is Resurging Despite Negative Recent Developments in Metaverse-adjacent Industries, Such as the FTX Scandal and Crypto Winter



Source: CryptoSlam, Financial Express, PR Newswire, BitKE, Medium, Decrypt; https://www.cryptoslam.io/nftglobal



Although Pessimism Has Followed Publicized Sector Missteps, There are Signs of Longevity in Consumer Interest







We are Entering the Part of the Life Cycle Where "Scammy" Projects are Dying Down and Interest is Growing in More Substantive and Robust Experiences

CALVARIA

- Calvaria is a P2E card game where players assemble 3D NFT battle cards to compete against others
- To start, users buy RIA, the game's native cryptocurrency, which allows them to purchase an initial set of cards
 - As players win, they can earn eRIA game tokens that can be used to upgrade a player's deck or convert to RIA
- Expected to release in Q2 2023, the game has already raised \$3 million in presale for the \$RIA token

THE SANDBOX

- The Sandbox is a platform where users can own land, build games and 3D creations, and share with others in the metaverse
 - Users have complete ownership of their creations as NFTs which can be traded on the various marketplaces
- Despite 2022 crypto headwinds, The Sandbox had high usage with over one million unique users and an average of 56k MAUs
 - In addition, almost 10,000 digital LAND parcels were sold for an average return of 109%, with prices only dropping to ~\$2,000/parcel during the crypto crash in November 2022



Next-gen NFT Initiatives Will Prioritize Consumer Value and Utility, Unlike Previous Ones that Mainly Attracted Speculators

FIRST-GENERATION NFT INITIATIVES

Paramount Star Trek NFTs

There has been backlash in the Star Trek community as NFTs launched by Paramount have not gained traction with the fan community

Many of these NFTs were **purchased by speculators as financial investments** rather than fans purchasing as memorabilia

NEXT-GENERATION NFT INITIATIVES

Clinique Smart Rewards

Clinique Smart Rewards members had a chance to enter an NFT raffle by sharing inspirational stories on Instagram, TikTok and Twitter

The top three would be rewarded
with two of the brand's products and
color-changing NFT art that symbolizes
the theme of those items

Porsche NFT Collection

Porsche halted minting and reduced the supply of NFTs after a failed launch due to customer complaints

 Fans complained about high mint prices and lack of utility for the NFTs during launch; Porsche is trying to remedy the latter

Starbucks launches Starbucks Odyssey

Starbucks Odyssey is a loyalty program that allows its members to earn and buy NFTs through activities such as playing interactive games or taking on fun challenges related to their knowledge of coffee and Starbucks





Part 2: What Is Real, What Is not — What Does The Data Tell Us?

Insight #6: The Metaverse is Just Another Sales Channel with no Utility



PART 1: GETTING REAL — WHAT'S THE STATE OF PLAY?



PART 2: WHAT IS REAL, WHAT IS NOT — WHAT DOES THE DATA TELL US?





As the Metaverse Continues to Evolve, the Market is Expected to Grow at a ~37% CAGR into 2030, Reaching ~\$3.17 Trillion in the Moderate Scenario

METAVERSE MARKET SIZE SCENARIOS



Note: Includes virtual assets, advertising, AR & VR hardware, digital media, live entertainment *Source: Statista, World Economic Forum https://www.weforum.org/agenda/2023/02/chart-metaverse-market-growth-digital-economy/*



Metaverse Use Cases are Quickly Surfacing Across a Broad Range of Industries



HEALTHCARE

AR/VR market in healthcare is poised to reach nearly**\$9.6 Billion** in value in the next five years due to increase in telehealth services and technological advancement



EDUCATION

Rising internet penetration and COVID-19 escalated global E-learning, with the market reaching **\$305 Billion in 2022** and expected to grow





Financial services organizations are **exploring a variety of applications**, including virtual branches, new loyalty models and subscriptions, banking marketplaces and more



Healthcare Oroviders Have Quickly Adopted AR/VR Technologies as a Means of Advancing Patient Care, but **Challenges Remain**



Virtual Learning is Starting to Include AR, VR and MR Experiences Across Environments, from Both "direct-tolearner" and In-house Enterprise Perspectives



Financial Services Organizations are Exploring the Metaverse by Expanding Services, Customer Interactions and Offerings Related to Crypto and Web3





Charting the Metaverse: Assessing if you Fit in and How

FTI Consulting can support you by assessing your metaverse readiness through the exploration of near-term options and long-term strategies to identify paths to success.



Develop **near-term and long-term initiatives** to capture opportunities with a **detailed execution roadmap** and support from **FTI Consulting's network of metaverse partners**

Identify and prioritize opportunities based on trends and scenarios leveraging a scorecard approach

Evaluate your company's metaverse value chain footprint and review possible metaverse scenarios



Meet Our Leaders

Primary Authors



Francesco Di Ianni Metaverse & e-Games Lead +1.310.746.7588 francesco.diianni@fticonsulting.com



Sumeet Gupta

Head of Digital Transformation Practice +1.415.812.4122 sumeet.gupta@fticonsulting.com



Cole Smith Senior Consultant +1.714.904.3531 cole.smith@fticonsulting.com

Other Contributors



Phil Schuman Head of the Media & Entertainment Practice +1 310.651.9060 phil.schuman@fticonsulting.com



Daniel Punt Senior Managing Director +1 310.651.9066 daniel.punt@fticonsulting.com



Javier Alvarez Senior Managing Director +971 50.657.8149 javier.alvarez@fticonsulting.com



Fede Membrillera

FTI Capital Advisors Global Co-Head +971 50.457.3919 fede.membrillera@fticapitaladvisors.com



Luca Bottura Managing Director +971 56.686.8239 luca.bottura@fticapitaladvisors.com

Other Contributors – Blockchain and Digital Assets Practice



Steve McNew Global Lead, Blockchain and Digital +1 936.232.9994 steve.mcnew@fticonsulting.com



or its other professionals.

Sam Davies Managing Director - BaaS Lead +44 (0)7811.691708 sam.davies@fticonsulting.com



Susana Esteban Senior Managing Director +44 (0)7977.297452 susana.esteban@fticonsulting.com



Jorge Carrasco Managing Director +971 50.662.3882 jorge.carrasco@fticonsulting.com



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Steven Fisher Managing Director +1 240.935.3953 steven.fisher@fticonsulting.com

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