

Q4 2022



# METaverse

MARKET REPORT



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# Introduction

2021 was a crucial year for the Metaverse. Companies like Meta, Epic Games, Microsoft and many other tech giants offered Metaverse products. Around this time, Metaverse became a buzzword. Metaverse comprises of a set of technologies that have been developing for decades. Virtual Reality, Artificial Intelligence and other enabling technologies are starting to come together, causing the most significant digital economy shift since the dot com era.

2022 was a foundational year for the Metaverse. This year, many products were showcased and tested in the market. Many innovative products were released, such as VR headsets, digital assets, and Web3 games. Unfortunately, like the dot com era, we saw a bubble that became increasingly apparent in the year's second half. While there was immense development this year, many significant challenges resulted in layoffs and financial failures.

The Metaverse Insider, launched in November 2021, has extensively covered the metaverse market. We spent 2022 covering every sector of the Metaverse market backed by research and data. We provided intriguing news and in-depth analysis of this emerging and fast-evolving market. Our Inaugural Market Report, focusing on Q3 2022, covered the history of the leading technologies of the Metaverse and the current state of these Metaverse Technologies. This year-end market report will analyze the development of those technologies in 2022 and our predictions for 2023.

# Metaverse Q4 Industry Highlights

## October 2022

### **HaptX Introduces Industry's Most Advanced Haptic Gloves**

HaptX has revealed the HaptX Gloves GQ, a haptic device designed for the enterprise metaverse. Enterprise Mixed Reality products are becoming essential in the Metaverse space as large corporations realize these technologies' potential. This product was announced during the Meta Oculus Pro launch, which was also intended for large-scale enterprise use.

### **EY Wavespace™ & EY Metaverse Lab**

EY is helping clients enable rapid testing and scaling of new ideas and business models with the help of the EY Metaverse Lab. Prominent firms such as EY and KPMG providing Metaverse and blockchain-related support to clients is a massive indicator of interest in this space.

## November 2022

### **FIFA Unveils Range of New Web3 Games Ahead of FIFA World Cup Qatar 2022™**

FIFA partnered with many emerging Metaverse companies, such as Uplandme, Matchday, Phygtl, and Altered State Machine. FIFA's strategy to expand into the gaming space through Metaverse-focused companies is an excellent sign for new tech companies providing Metaverse services.

### **Sony Unveils Metaverse Motion Capture Device Mocopi**

Sony has announced the release of Mocopi, a next-generational motion capture device. Devices capturing motion in virtual reality are crucial for the mixed-reality experience. Fitness and Gaming VR applications will benefit significantly from advanced motion-tracking devices.

**December 2022**

## **South Korea's Science Ministry Announce Pan-government Strategy on Metaverse**

The Ministry of Science and ICT has announced a pan-government strategy on the Metaverse as part of the Digital New Deal 2.0 initiative. South Korea, home to tech giant Samsung, is a hub for development and innovation. Governments of South Korea, Dubai, and Tuvalu all announced their Metaverse strategies this year.

## **Report: Metaverse Market Size Expected to Hit 5.8 trillion by 2030**

Metaverse Insider extensively studied the Consumer and Enterprise markets which make up the Metaverse. After months of research and analysis, Metaverse Insider releases an in-depth Market Size Report detailing the growth of the Metaverse Industry. The full Metaverse Market Size report is available for purchase at [www.metaverseinsider.tech/reports](http://www.metaverseinsider.tech/reports)

# Organizations Venturing into the Metaverse in 2022

Many established brands have delved into the Metaverse. These brands acquired Web3 companies, launched digital asset collections and set up virtual experiences. We have identified three brands in each category which have been adopting metaverse-based technologies.

Brands	Product Description	Sector Description
<b>Automotive</b>		
Kia	Kia launched various NFT projects this year to promote their car releases.	Digital Assets are used to enhance car sales for various automotive companies. There is an exclusivity that users get for purchasing a new car from these automotive companies. On the other hand, many brands like Audi have started their first NFT projects with a purpose to raise funds for charitable organizations.
Acura	Acura launched limited edition Integra NFT; first 500 customers to reserve the new 2023 Acura Integra can claim these NFTs.	
Audi	OMR & Audi raised funds for UN Refugee Aid Germany with an NFT drop.	
<b>Fashion</b>		
Nike	Late last year Nike acquired a digital collectibles company called RTFKT. Throughout 2022, Nike launched various NFT collections in collaboration with RTFKT.	Fashion brands <sup>1</sup> have had some innovative approaches to integrating their brands into the Metaverse. These strategies in 2022 included creating a virtual space, launching NFT collectives, and building interactive Virtual Spaces. Most Fast-Fashion and athletic apparel brands seemed to invest in virtual spaces in metaverses while many luxury brands have partnered with digital asset companies to create exclusive NFT collections.
Adidas	Adidas launched various digital assets throughout the year, including a collaboration with Prada.	
G-Star	The G-NO Avatars NFT collection included 10 unique digital designs of their mascot, G-NO the rhino.	
<b>Sports</b>		
Serie A	OneFootball has been named the 'official video moments partner' of Serie A, giving the digital media platform the rights to mint and distribute non-fungible tokens (NFTs).	Sport organizations have used NFT projects to launch limited digital collections. Most sports organization have found NFT companies to create limited collections of players' pictures or moments during a game. Dapper Labs have been a leader in the Sports NFT market with launching limited digital asset collections of NBA, NFL, and La Liga.
Australian Open	6,776 generative AO Art Ball NFTs, each linked to an individual plot on the official Australian Open court.	
German Football Association	The DFB "Road to World Cup" is a collection of 25 NFTs — each player and the head coach of the German National Football Team will have one unique 1of1 digital trading card living on the blockchain.	

# Development in the Metaverse

Many companies have continued to develop in the Metaverse in the past year. Some of the product releases were much-awaited products and services. Most big companies continue to pivot their offerings towards the Metaverse. Here are some of the most prominent developments.

## Ethereum Merge:

On September 15th, the much-awaited Ethereum Merge finally happened. The Ethereum blockchain keeps an immutable record of all transactions. Initially, Ethereum, like Bitcoin, was a Proof-of-Work concept. The Proof-of-Work concept is a decentralized consensus mechanism which requires members of a network to expend effort-solving arbitrary mathematical puzzles to prevent anyone from gaming the system. This system led to many cryptocurrency mining companies being formed. The bigger the mining facility, the better the chances of getting the Ethereum crypto. Energy consumption and rising mining expenses became prominent issues among the crypto community. Thus, an alternative was presented which allows the owners to stake their coins to validate transactions. This is known as Proof-of-Stake. In September of this year, Ethereum 2.0 came into being as the merge was completed. Post-merge, Ethereum 2.0 network should consume 99.5% less energy.<sup>ii</sup> This is a massive feat for the world's most extensive blockchain network.

## Meta Quest Pro:

In Connect 2021, when Facebook announced its name change to Meta, Zuckerberg also announced an advanced VR headset that the company was working on. It was dubbed as Project Cambria.<sup>iii</sup> This was highly anticipated as it was announced as the first high-end VR headset meant for enterprises. This year in Connect 2022, Meta announced their most advanced VR headset yet, called Meta Quest Pro. By many accounts, this was the first genuine mixed-reality headset which mixed VR with AR. Prominent organizations like Microsoft and Accenture are working with Meta to bring the Mixed-Reality vision to life. As many reviewers of this device will point out, this headset has many imperfections. The customers' complaints are the two-hour battery life, USD 1,500 price point, and eye strains caused by prolonged use. However, the Quest Pro was the most significant release of the Metaverse Industry, being one of the first high-end Mixed Reality headsets for enterprise use. Moreover, ByteDance's Pico recently released their competitor to the Quest Pro. More enterprise metaverse devices are expected to be released in 2023.

# Q4 Market Downturn

## Crypto Winter - Past Lessons

Cryptocurrencies gained a lot of traction from 2020 to early 2022. It can be argued that Covid-19 and the stimulus cheques distributed around the first-world countries contributed to the sudden rise in crypto prices. However, there have been other bubbles in the short life of cryptocurrencies. There was a similar crypto bear market at the end of 2017. Around this time, prices of Ethereum and Bitcoin dipped.

Moreover, there were well-known crypto scams and collapses before 2022. A popular CeFi Canadian Exchange, [QuadrigaCX](#),<sup>iv</sup> was why many people lost their cryptocurrencies when the exchange's founder disappeared. To this day, users have yet to be able to get the funds back that they had entrusted to a famous and seemingly trustworthy co-founder Gerald Cotten.

Another time a seemingly trustworthy and charismatic co-founder could take advantage of investors was the founder of OneCoin, Ruja Ignatova. Ignatova was understood to be a knowledgeable young professional who studied at a prestigious university, the University of Oxford, and worked for McKinsey & Company. In 2014, she founded OneCoin. OneCoin was a "centralized" cryptocurrency that recruited investors worldwide. On March 1st, 2016, OneCoin shut down for maintenance. As of now, Ignatova has yet to be found. She is on Europol's and FBI's most wanted lists.

The crypto world has experienced co-founders of companies with impressive educational backgrounds and work experience in some of the top organizations in the world. These founders have taken advantage of the investors in their projects.

Despite the warning signs of the past, during the bull market of 2020 and 2021, many new investors still needed to identify mistakes made by earlier investors in crypto from 2015 to 2017. If these warning signs had been considered, cryptocurrency organizations' magnitude of losses from failures may not have been this brutal.

## Crypto Winter of 2022

In 2022, crypto prices collapsed. Some of the industry's most reliable and popular institutions have taken a financial hit during this time. The current SEC chairman, Gary Gensler, recognizes the potential of digital assets and taught a class on Blockchain at MIT in 2018. Despite this, many of the largest centralized crypto companies failed due to a lack of oversight and regulation. Here are three crypto institutions that collapsed this year, despite having charismatic and popular founders and an eager and trusting audience.

### 1. Terra Luna

The collapse of Terra Luna led to approximately \$60 billion being wiped out of the crypto market. Do Kwon, the founder of Terra Luna, was a Stanford University graduate. He was the founder of Terra, a blockchain network. TerraUSD (also known as UST) and Luna are two sister coins on the same network, Terra. TerraUSD was a stablecoin. Unlike other stablecoins, which are fiat-backed, UST was backed by Luna. Hence, this presented a much more riskier than other stablecoins pegged with the US dollar. For UST to retain its peg, each stablecoin had to be worth \$1 Luna. As Luna's price started to drop drastically, the UST coin became unstable.

The Anchor Protocol, a decentralized money market built on the Terra blockchain, was also a critical factor in the collapse. This platform provided a 20% yield for UST holders who deposited their tokens on their platforms. Anchor would use these deposits as a loan to another investor. At its peak, 72% of UST was deposited into Anchor with an attractive yield. Anchor became the primary driver for Terra's success, which led many skeptics to consider this as a Ponzi Scheme.

On May 7th, 2022, over \$2 billion worth of UST was unstaked. This massive selloff brought UST to \$0.91. As the stablecoin started to depeg, panic among investors led to more UST being sold off. More Luna was minted to retain the peg, which circulated a massive supply of this Crypto. Eventually, the prices of Luna and UST crashed, causing other Crypto companies to go into liquidation. Three Arrows Capital is one of the most prominent investors to be affected by this crash.

### 2. Three Arrows Capital

Kyle Davies and Su Zhu graduated from the Ivy League University, Columbia University and worked for Credit Suisse. The fund, Three Arrows Capital began in 2012 but shifted to cryptocurrencies in 2017. The firm backed some of the most promising players in Crypto, including Luna, BlockFi, Avalanche etc. Moreover, both co-founders were famous on social media for their views on the crypto space.

The fund faced regulatory issues this year when a class action lawsuit was filed against them on June 17th, 2022. Shortly afterwards, on June 30th, 2022, the Monetary Authority of Singapore (MAS) reprimanded Three Arrows for having more than the allowed 250 million dollars under management. The Financial Times reported that Three Arrows had failed to meet its margin calls during these regulatory issues. The fund struggled to repay its loans and filed for Chapter 15 bankruptcy. The domino effect of Three Arrow's inability to pay its lenders may have led to Voyager Digital's demise as well.

### 3. FTX

In a bear crypto market which resulted in the collapse of many massive players in this game, the downfall of FTX and its co-founder Sam Bankman-Fried has garnered the most media attention. FTX had gotten off to a solid start this year, raising \$1 billion in January 2022. The valuation of this latest funding round was \$32 billion, an awe-inspiring feat for a 3-year-old company. In the Summer of 2022, when Terra, Three Arrows, and Voyager Digital struggled, FTX was seen as a safe place to store one's digital assets. Sam Bankman-Fried became the go-to person for many mass media outlets. Sam Bankman Fried, as recently as August, was seen on many media channels explaining the cryptocurrency market.

Moreover, celebrities and influencers like Larry David, Tom Brady, and Kevin O'Leary were just some of the endorsers of FTX. Moreover, deals with the International Cricket Council and Miami Heat were huge endorsements by FTX. Thus, the collapse of FTX was unfathomable by many onlookers.

However, the domino effect of FTX's demise started with an article by [Coindesk](#) reporting FTX's \$8 billion liabilities. Alameda Research offered to buy FTT tokens at \$22 from Binance when Binance's CEO suggested selling FTT tokens. Within one week of this news by Coindesk, the house of cards seemed to collapse as Binance announced they signed a non-binding LOI to acquire FTX. The news of FTX getting acquired by its biggest competitor shocked many onlookers. Three days after Binance announced the intent to purchase FTX, the deal collapsed, and FTX filed for Chapter 11 Bankruptcy. Since this news is very recent, not all information has been disclosed. However, misuse of client funds and risky bets by Alameda Research has been widely discussed. John Ray III, a restructuring officer who is the current CEO of FTX, said, "Never in my career have I seen such a complete failure of corporate controls and such a complete absence of trustworthy financial information as occurred here."

# Mass Layoffs and Hiring Freezes

2022 has been a year where hiring freezes and layoffs have been in the news. These layoffs have mainly been limited to Digital companies and have not affected the broader economy yet. However, well-known Metaverse-focused tech companies have had mass layoffs this year, including Meta, Crypto.com, Kraken, and Coinbase.

## Traditional Tech Companies

Meta (formerly Facebook) has been laser-focused on penetrating the fast-evolving Metaverse market in the past year. The company partnered with Microsoft and Accenture to improve its metaverse offerings and present its vision to the broader enterprise market this year. However, reports of Meta's investment in these products and services in an unproven market have been the cause of skepticism. In November 2022, Zuckerberg announced a hiring freeze through Q1 2023 and layoffs of more than 11,000 employees - reducing the Meta team size by 13%.

Microsoft announced layoffs in July, and Snap, the creator of AR glasses called Spectacles, announced layoffs in August. Other tech giants, including Twitter and Amazon, announced layoffs in November. All these tech companies have been invested in specific sectors of the Metaverse. After a hiring boom during the pandemic, a recession may be anticipated. In the US alone, about 90,000 workers were laid off during the course of the year.<sup>vi</sup> The broader economy is yet to be affected by the layoffs. However, these cuts by the tech sector may be a bad omen for the rest of the economy.

## Crypto Layoffs:

As discussed earlier, many crypto giants collapsed during the second half of 2022. However, many surviving crypto giants have cut down on their mass spending. This resulted in many layoffs in the crypto sector - especially centralized crypto exchanges. As early as June 2022, Coinbase was the first major crypto exchange to announce releases. When \$2 trillion was erased from the crypto market, Coinbase announced laying off 18% of its layoffs.<sup>vii</sup> As trading volume dried up, other crypto companies were also forced into layoffs. Crypto.com laid off at least 40% of its workforce over the year. As the market adjusts to the crypto boom ending, there will be a rolling effect in 2023.<sup>viii</sup>

# 2023 Outlook

## Marketing and Brand Adoption

On page 4, we listed brands delving into the Metaverse space. Many established brands purchased zones in virtual worlds like The Sandbox, Decentraland, and Roblox in 2020 and 2021. While the purpose of these virtual lands is to be able to conduct business as usual, most of these spaces were purchased as virtual advertising spaces. At the same time, other brands chose to invest in the Metaverse by releasing digital assets for users to buy.

Here are some ways fashion brands got their names out in the Metaverse Industry.

Fashion in the Metaverse		THE METaverse INSIDER		Athletic Apparel	Luxury Fashion
Brand	HQ	Metaverse Partner(s)	Activity	Fast Fashion / Mid-Range	LVMH Brands
		<b>ROBLOX</b>	Acquisition	- Nike acquired RTFKT, used to release the company's NFT projects - NikeLand is a virtual space inside Roblox	
		<b>SANDBOX</b>	Virtual Space	- Adidas acquired a virtual property in The Sandbox - Adidas collaborated with Yuga Labs, creators of Bored Ape Yacht Club for an NFT Project	
			NFT Collection	- Puma launched Black Station, an immersive Metaverse Experience - Puma changed its twitter name to PUMA.eth	
<b>FOREVER 21</b>		<b>ROBLOX</b>	Virtual Space	- Forever 21's virtual world Forever 21Smart City allows the company to have virtual space inside Roblox - Players in Forever 21Smart City can create their own shops, hire employees, and individually design products	
		<b>ROBLOX</b>	Digital Clothing	- Tommy Hilfiger partnered with Nirtland's Animal Crossing New Horizons - Tommy Hilfiger launched its virtual clothing collection for Roblox players	
<b>boohoo group plc</b>			NFT Project	- Boohoo launched its first Digital collection, an NFT project	
<b>RALPH LAUREN</b>		<b>ROBLOX</b> <b>ZEPETO</b>	Virtual Space	- Ralph Lauren launched a virtual game on Roblox called Ralph Lauren Winter Escape - Ralph Lauren's Roblox game included gender-neutral collections for avatars	
<b>DOLOE &amp; GABBANA</b>		<b>UNXND</b>	NFT Project	- Dolce & Gabbana launched an NFT project called Collezione Games - Some NFTs of the brand's NFT project came with physical pieces	
<b>BALENCIAGA</b>			Digital Clothing	- Balenciaga launched digital skins for players in Epic Games' Fortnite	
<b>BURBERRY</b>		<b>ROBLOX</b>	Digital Clothing	- Burberry designed digital skins for the game, Honor of Kings - Burberry launched a virtual bag collection on Roblox	
<b>LOUIS VUITTON</b>			NFT Project	- Louis Vuitton launched Louis - The Game in where players get to collect NFTs designed by digital artist called Beeple	
<b>GIVENCHY</b>			NFT Project	- Givenchy launched 15 NFTs on Polygon - Several luxury companies, under the name Aura Blockchain Consortium were consulted for Givenchy's NFTs	
<b>JW ANDERSON</b>			NFT Project	- JW Anderson's first NFT was a Candigan worn IRL, by the artist Harry Styles. This Candigan is now a part of the British National Museum	
<b>Dior</b>			Digital Avatars	- Dior partnered with Ready Player Me to create digital avatars - Dior's NFTs allowed owners access to exclusive Dior Fragrances for purchase	

NOTE: NON-EXHAUSTIVE LIST & IN NO PARTICULAR ORDER

While setting up virtual spaces in established metaverse worlds and launching digital assets was considered the go-to strategy for brands, there is an expectation of more innovative approaches in the next year. There was an expectation among brands that specific metaverse spaces would get more traction than they did, and thus, they began to buy virtual land and release projects.

Spaces in Roblox were popular among younger population before the popularity of the metaverse buzzword. Last year, many decentralized virtual worlds got extra traction during the crypto and stock boom. With the downfall of those crypto and VR trends, the traction of decentralized worlds dropped as well. Brands are beginning to realize that the best way to adapt to the Metaverse is by using the technologies the metaverse industry is being built upon.

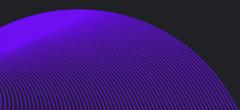
These two brands are excellent case studies of brands using the technologies to build their metaverse-related experiences from the ground up.

### **Puma:**

Puma has delved into the Metaverse by launching an experience in Roblox, allowing players to play games and win virtual Puma gear. However, realizing the true potential of the Metaverse, Puma launched a website experience called BlackStation which features exclusive NFTs with limited edition redeemable physical sneakers, as part of its 'FUTROGRADE' show during New York Fashion Week. This is an exciting space for the brand as they invest in a truly new and innovative experience that can be adopted as the technology improves.

### **Canadian Tire:**

Canadian Tire is a Canadian retail company which operates in the automotive, hardware, sports, leisure and housewares sectors. During the Christmas season, many shoppers flock to Canadian Tire to purchase Christmas trees and decorations to go with it. This Christmas season, Canadian Tire announced that buyers could use their VR headsets to decorate their virtual trees. Using VR and AR technology to create better customer shopping experiences will be one of the emerging trends of the metaverse eCommerce industry.



## Decentralization

During the past year where centralized blockchains like Terra and centralized crypto exchanges like FTX collapsed. Many crypto stakeholders are circulating the idea of Web3 and decentralization. Products which are genuinely decentralized and embody the ideology of Web3 may gain more traction throughout 2023.

Industries where decentralization will have the most impact include:

**Hardware Wallets:** Hardware Wallets are used to store cryptocurrencies and digital assets of a centralized exchange. Due to the recent collapse of FTX, Hardware Wallets have gained traction as investors look for a way to store their assets in a safer space.

**DeFi Protocols:** DeFi protocols are customized autonomous programs developed to overcome challenges in the traditional banking business. Transparency and self-ownership are two of the biggest selling points of DeFi protocols. Ethereum addresses are encrypted and pseudo-anonymous keys, every transaction on the Ethereum network is broadcasted to other users and validated by them.

## Motion Tracking and Haptics

Motion Tracking and Haptics are essential supporting equipment in Mixed Reality. Motion Tracking records the movement of an element and applies the recorded training to a target in the virtual environment. Meanwhile, haptic technology helps users experience touch using force in a VR environment. As VR applications develop, the need for such technologies will develop further. Here are examples of both technologies

**Motion Capturing:** Sony is releasing a Motion capturing device in Jan 2023. This sensor captures Motion through six different sensors. This device could benefit developers looking to render realistic virtual reality movements.

**Haptic Technology:** HaptX is releasing haptics gloves for enterprise users. This product should be available around Q3 2023. These haptics gloves will come with an airbag which helps provide realistic touch. Also, they come in 4 different sizes for accurate fidelity.

# Conclusion

The Metaverse Industry has seen significant progress over the course of 2022. There have been some significant developments in Mixed Reality and their supporting devices such as haptics and motion sensing. The applications being built for virtual reality headsets now include health and fitness, productivity, and gaming. The enterprise products for the Metaverse are being developed by Metaverse companies as this untapped space has gained more recognition in the past year.

However, the market suffered some setbacks as well. During the second half of 2022, the blockchain and crypto sector was deeply affected by a significantly decreased trading volume, bankruptcies, and scandals. In other sectors, there has been a decrease in hiring and layoffs will continue onto Q1 2023. Despite some unfortunate occurrences in the industry, the overall market remains positive about the Metaverse future as innovative projects are still underway and larger organizations continue to invest in newer products.

The Metaverse Insider continues to research the market in-depth and provide up to date news and analysis backed by data. We truly believe research and using the right data will help propel this industry forward. This report was our second quarterly report. We used this piece to focus on the growth opportunities in the market and highlight the bigger players in the metaverse space. However, we also highlight the burst of the metaverse bubble in the second half of the year. The Metaverse Insider looks forward to providing research-based information to our readers in 2023.

# End Notes

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<sup>i</sup> <https://metaverseinsider.tech/2022/10/08/fashion-in-the-metaverse/>

<sup>ii</sup> <https://www.forbes.com/uk/advisor/investing/cryptocurrency/understanding-ethereum-merge/>

<sup>iii</sup> <https://metaverseinsider.tech/2022/04/22/meta-in-the-metaverse/>

<sup>iv</sup> <https://www.osc.ca/quadrigacxreport/>

<sup>v</sup> <https://www.coindesk.com/business/2022/11/02/divisions-in-sam-bankman-frieds-crypto-empire-blur-on-his-trading-titan-alamedas-balance-sheet/>

<sup>vi</sup> <https://www.visualcapitalist.com/visualizing-tech-company-layoffs-in-2022/>

<sup>vii</sup> <https://www.bloomberg.com/news/articles/2022-11-10/coinbase-coin-is-cutting-60-positions-in-latest-crypto-winter-layoff#:~:text=Crypto%20companies%20have%20been%20forced,equivalent%20of%20roughly%201%2C200%20employees.>

<sup>viii</sup> <https://coingeek.com/crypto-com-understated-layoffs-dismissed-at-least-40-of-its-workforce-report/>

