

ICXI -POST newsbriefing

Vol 2 – Issue 5 October 2022

Introduction From The President

The Metaverse is here, well almost here, and undoubtedly has become the newest buzzword in the tech/comms/trading world. Yet its communication of itself has not been overburdened with clarity. It is a world full of three letter abbreviations, acronyms and techspressions that carry meaning to those in Metaverseland but can still be somewhat mysterious to the majority of customers who may well be required to engage with it in a its rapidly advancing future applications.



Visitors are pictured in front of an immersive art installation titled "Machine Hallucinations — Space: Metaverse" by media artist Refik Anadol, which will be converted into NFT and auctioned online at Sotheby's, at the Digital Art Fair, in Hong Kong, China September 30, 2021. REUTERS/Tyrone Siu/File Photo

Defining the metaverse is also not straightforward and falls into the “*It depends on who you ask*” category. At it’s simplest level it may be seen as the “*internet with knobs on*” with most of the knobs to do with the introduction of 3D environments of one sort or another . At another level it can be seen as the first stage of an evolutionary journey that may take the whole world of human social and commercial interaction into an entirely new space potentially even more different than the internet world has been to the traditional real world.

Some of the Terms

VR - Virtual Reality

This is the type of phenomena more usually experienced via a 3D headset

“A computer-generated simulation of a three-dimensional image or environment that can be interacted with in a seemingly real or physical way by a person using special electronic equipment, such as a helmet with a screen inside or gloves fitted with sensors.”

AR – Augmented Reality

In simple terms this technology is able to combine real world “live” images seamlessly into a virtual world with an interaction capability

“A technology that superimposes a computer-generated image on a user's view of the real world, thus providing a composite view.”

MR- Mixed Reality

The ability to mix real world and virtual world experiences for example to watch a live sports broadcast from a virtual location and interact by buying souvenirs.

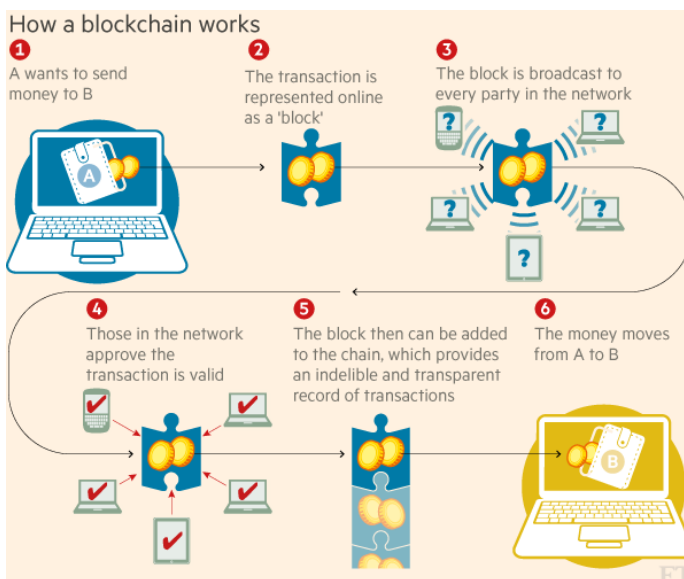
“A medium consisting of immersive computer-generated environments in which elements of a physical and virtual environment are combined”

Blockchain Technology

It is a decentralised technology that is not owned or controlled by any single entity or individual.

Blockchain is a shared, immutable ledger that facilitates the process of recording transactions and tracking assets in a business network. An asset can be tangible (a house, car, cash, land) or intangible (intellectual property, patents, copyrights, branding). Virtually anything of value can be tracked and traded on a blockchain network, reducing risk and cutting costs for all involved.

<https://www.ibm.com/uk-en/topics/what-is-blockchain>



What is the Metaverse

Deloitte describe it as

The metaverse is the popular term used to describe what many expect to be the next significant paradigm for how we use digital technologies and networks to interact and collaborate with others and have virtual experiences of all kinds. It's not a single technology or device, and it's not a service of any one company. It's the convergence of several separate technologies, all of which are quickly maturing for mainstream use. Together, those technologies can create the experience of an immersive, three-dimensional environment in which users interact with their surroundings and other users as if they are in a shared space.

But a fully developed metaverse is more than merely a virtual space. It also has at least two other important characteristics that enhance its potential as a new platform with a wide variety of uses. First, it is likely to include both the physical and digital/virtual worlds in the user's experience. Second, the metaverse is expected to have a native economy, including digitally native assets and trade. While the Internet today has an important relationship to the economy, the metaverse could have its own economy.

Deloitte goes on to present some ways in which it may develop

LOW ORBIT	DOUBLE STAR	BIG BANG
 <p>The metaverse excels for the things it's good at but never becomes a general-purpose platform</p>	 <p>There's not a single metaverse, but a handful of major players vying for share of a dynamic marketplace</p>	 <p>An open, interoperable metaverse becomes the dominant interface through which we conduct most of our daily activities</p>
<ul style="list-style-type: none">• Fragmented marketplace, with no dominant player and overwhelming consumer choice• User interface works well for certain uses but is difficult to integrate into daily life• Consumer adoption high in gaming, sports, entertainment, and some retail• Enterprise adoption limited to some team collaboration, virtual conferences, augmented training/learning, and immersive digital twins• Regulation inconsistent across nations and regions	<ul style="list-style-type: none">• Lack of interoperability requires users to commit to a "home" platform• Abundant capital and active M&A leads to a highly concentrated market• Competition drives accelerated technological innovation in hardware and software• Ecosystems compete for user attention through exclusive content and partnerships• Platforms enact strong and effective self-governance	<ul style="list-style-type: none">• User interface enables relatively seamless merged reality between physical and digital worlds• Identity in the metaverse is considered equivalent to that in the physical world• No single provider, with many innovators and an open, interoperable system• Pervasive adoption across consumer and enterprise use cases• Strong governance, with strict and enforceable rules around digital ownership and privacy/security
<p>The bottom line: A specialty market for specific uses that will complement but not replace other technologies</p>	<p>The bottom line: A mainstream market for many applications but split among the next generation of tech leaders</p>	<p>The bottom line: The full migration of today's internet and more into an immersive world in which most businesses and consumers operate</p>

Some other definitions.....

The term the 'Metaverse' has been defined in many ways, so, to give some clarity on what it actually is, we would describe it as a highly immersive virtual world, where people can gather to socialise, game, and work; an embodied internet that you are interactive in, rather than merely looking at. The internet is generally seen as a place to buy items or consume information, the Metaverse, however, is all about immersive experiences, taking part in activities such as games, social interaction, learning, training and exploring virtual spaces.

<https://www.brandlab-360.com/post/what-is-the-metaverse>

The metaverse is "an evolution of how users interact with brands, intellectual properties and each other on the internet."

Tim Sweeney, CEO of Epic Games

The metaverse is a hypothetical iteration of the Internet as a single, universal and immersive virtual world that is facilitated by the use of virtual reality (VR) and augmented reality (AR) headsets In colloquial use, a metaverse is a network of 3D virtual worlds focused on social connection

Wikipedia

The metaverse is a combination of numerous technologies including virtual reality, augmented reality, and eye-tracking. All of these elements are used to create the ultimate virtual experience within a virtual universe.

<https://www.one37pm.com/nft/a-beginners-guide-to-the-metaverse>

Basically, the idea behind the metaverse is to create a space similar to the internet, but more tangible, so that users can interact with the world via digital avatars. Plus, unlike the modern internet, metaverse users experience environmental changes in real-time. If a user makes a change to the metaverse, this shift is visible to everyone.

In theory, you could sit around a virtual meeting table with colleagues from around the world, then break for lunch and head to a virtual art expedition, and then meet up for dinner with your friends when work ends.

<https://www.lxahub.com/stories/wtf-is-the-metaverse-and-how-do-you-market-in-it>

It appears that the definitions are driven largely by the viewpoint of those involved in the design and development of products and services which they foresee have the potential to be sold into the metaverse market. In that sense the Metaverse is not a consumer demand led market but rather a market maker development where the potential opportunity is there to be created and exploited by technological innovation.

So How Are The Metaverse Opportunities Currently Being Exploited?

There appear to be three main streams of opportunity at present.

1. Those organisations interested in developing/owning the platform(s)

A metaverse is not centrally programmed like Disneyland; therefore, it is not a “virtual theme park.” Similarly, a metaverse is not a “new app store”; instead, it is fundamentally different from contemporary internet/mobile paradigms, design and priorities.

<https://cointelegraph.com/metaverse-for-beginners/what-is-metaverse-in-blockchain>

Does that mean they own the Metaverse? If not who does

The short answer: no one, and everyone.

The longer, more helpful answer: the tool builders, the software developers, world builders, artists, 3D modelers, game developers, users, investors, those are the proverbial owners of the metaverse.

Suppose we want to look at it from a business perspective. In that case, the companies that own the tools that allow for all the activities mentioned above indeed hold sway over the future of the metaverse for the coming decades.

Tool smiths and world builders

Virtual worlds are to the Metaverse what websites are to the internet, and we can expect them to be popping up in the same fashion. Therefore, those companies that make world-building and digital asset creation simple will be the website builders of tomorrow. Those who know how to use those tools effectively are the web developers of tomorrow.

<https://insidetelecom.com/who-really-owns-the-metaverse/>

Currently the big name players. Meta, Apple, Microsoft et al are investing heavily in Metaverse technologies but it does not mean they own it.

2. Those interested in developing, selling and trading Non Fungible Tokens (NFT) and Virtual Real Estate (VRE) and other virtual assets.

Non Fungible Tokens

If something is fungible, it means it is replaceable.

A non-fungible token is a type of digital token and cryptoasset associated with the blockchain, which acts as a digital certificate of authenticity. All kinds of digital objects can be bought and sold as NFT's, including images, music, videos, books, virtual land and even tweets.

<https://www.rahmanravelli.co.uk/expertise/nfts-non-fungible-tokens-risks-regulation-and-the-law/>

So What Technology Drives The Metaverse

It is not powered by a single technology but a paper by ITU The United Agency for ICTs reports that there are seven key technologies with its primary resource being Artificial Intelligence

The metaverse is expected to become the next big breakthrough in the Internet's evolution, with seemingly endless potential to transform how we live, transact, learn, and even benefit from government services.

But making the metaverse a functional – albeit virtual – reality still requires significant advances in many different underlying technologies.

In some cases, these essential innovations are already underway. Meta, for instance, introduced an AI supercomputer in January 2022, claiming a range of uses from ultrafast gaming to instant, accurate and simultaneous translation of large amounts of text, images and videos. The computer will also be key in developing next-generation AI models and become a foundation which future metaverse technologies can look to and build upon. At the same time, consumer devices such as virtual reality (VR) headsets or smart glasses still fail to capture or transmit the full metaverse experience despite being available on the market today. New devices will need to be designed to provide a truly seamless experience for metaverse users

Piecing the puzzle together

*Experts predict that the metaverse will be based on **seven essential technologies: 5G communication, extended reality, brain-computer interfaces, cloud computing, blockchain, digital twins, and artificial intelligence.** Of these emerging technologies, AI may be the most crucial piece of the metaverse puzzle thanks to its potential to enable the metaverse to scale.*

Deep learning-based software will likely power most interactions autonomously, with chatbots along with other types of natural language processing (NLP) technologies supporting all kinds of exchanges in this new extended reality space.

AI will also enable machines behind the metaverse to not only understand user inputs, from text to images and even videos, but also to respond correctly regardless of the user's input language. However, this will require huge amounts of data and training such advanced NLP models is likely to take years.

In metaverse development, AI is not only a necessary technology in the areas of computer vision and natural language processing, but also in VR and augmented reality (AR). For example, in AR technology AI is used in camera calibration, detection, tracking, camera pose estimation, immerse rendering, real-world object detection, virtual object detection, and 3D object reconstruction, helping to guarantee the variety and usability of AR applications.

Eventually, most 3D images, animations, and speech in the metaverse will likely be generated by AI. Machine learning models could also be used to automate smart contracts, distributed ledgers and support other blockchain technologies to allow virtual transactions.

<https://www.itu.int/hub/2022/06/ai-driving-force-metavers>

Virtual Real Estate

Chainalysis suggests The key to sustainability of the metaverse may lie in the virtual real estate market,

The blockchain analyst's latest State of Web3 report found the growth of blockchain-based virtual real estate (VRE) prices has outpaced physical real estate. VRE prices exploded 879% from September 2019 to March 2022, while real-world real estate prices grew by 39% during the same time period.

Of course, virtual and physical real estate are not the same thing. Humans need land, homes and buildings to live, work, study and sleep. Metaverse real estate, on the other hand, is all about retail, recreation and social activities.

The main driver of value in the metaverse will be utility, which is currently the "missing layer for most metaverse platforms," Sam Huber, CEO of metaverse development studio LandVault, told Blockworks.

Utility is directly related to business models that landowners can create on top of their land, he explained. From selling NFTs as tickets to events to e-commerce and advertising — any potential revenue generated gives metaverse land value.

<https://blog.chainalysis.com/reports/virtual-real-estate-blockchain-gaming-web3/>

New to metaverse real estate, here's a quick primer?

Metaverse real estate is a block of 3D space that virtual world participants can own. Each parcel is a non-fungible token (NFT), a unique string of code stored in a crypto wallet and tracked on blockchain technology.

This digital ledger is a chain of title that demonstrates proof of ownership.

The amount of land on each virtual world platform is theoretically finite, and each land token has coordinates, just like real-world parcels. Combining two or more adjacent parcels results in an estate.

Property owners can develop their land into VR worlds, overlay user experiences, build interactions, superimpose objects, etc.

Virtual real estate can be bought (wholly or as fractional ownership), sold, or rented. Land is bought in each metaverse's primary marketplaces or secondary marketplaces.

Buyers can purchase land with a metaverse mortgage or pay with cryptocurrency via an ether-based wallet compatible with the metaverse. Some virtual worlds only transact in tokens specific to their platform. If using cryptocurrency, you must pay in the accepted cryptocurrency.

\$1.9 billion worth of land has been sold across the top ten virtual world platforms.

<https://www.rubyhome.com/blog/metaverse-real-estate-stats/>

3. Those Exploiting the Creative Marketing and Communications Opportunity

This is the area that is possibly the most, but not yet fully, developed, area of metaverse opportunities.

The metaverse environment offers the opportunity to create new, very personalised and exciting customer communication content and interaction.

Techtarget.com identify some of the key considerations for marketers entering the Metaverse

Keys to marketing in the metaverse

The metaverse is about creating an experience for customers. Whether marketing products or services, there are ways for marketers to embrace a future in the metaverse.

Organizations should

- 1. Set goals before entering the metaverse*
- 2. Experiment because platforms constantly evolve.*
- 3. Start small to test reactions and make the necessary adjustments.*
- 4. Consider how to use the metaverse to reach the target audience.*
- 5. If the main goal is to increase sales, then offer virtual items similar to those found in brick-and-mortar stores.*
- 6. Find a way to connect the two so people can have them both virtually and physically.*
- 7. Be sure to know the audience before entering a metaverse platform*



<https://inovatorstrend.com/innovations-around-the-world/>

Ways marketers can work in the metaverse to reach their audience:

1. *Make collectibles available. People enjoy collecting items, and there is a new opportunity to create another collection in the metaverse. Digital collectibles can also be traded with other users. Nike, for example, is creating NFTs for digital products, which are unique and secured with blockchain technology to prove ownership.*
2. *Engage with existing communities. Businesses shouldn't show up to an existing community and push marketing on its members. Instead, consider the style of the current platform. Interact with current members to create user-generated content -- such as videos, text, images and audio*
3. *Use native advertising. As people explore the metaverse, there will be opportunities or native advertising such as billboards on a virtual street or product placement. There are also sponsorship opportunities for events within the metaverse.*
4. *Create a specific metaverse platform. This is the most expensive and biggest way to invest in the metaverse. Businesses can create a world specific to a company's product or service; however, this full experience may take time and research and a significant investment to find the best fit with the target audience.*
5. *Allow customers to try products. Using virtual and augmented reality, companies can see a 3D version product before buying it. Car companies, such as Porsche and Hyundai, have created virtual viewing rooms and events to get a virtual tour of the car*
6. *Design interactive live events. Many events went virtual when the pandemic hit, but the metaverse can take them to a new level. These kinds of events can be interactive with 3D options.*



Challenges to marketing in the metaverse

One of the biggest challenges of the metaverse is the newness, making companies unsure about diving in. There is also no regulating authority, which is troublesome to many.

The technology can also be a problem. To become fully immersed in the metaverse, users need the latest technology, such as high-end computers and VR headsets or lenses, which can be expensive. Not everyone has access to these devices, which can limit the potential for marketers to reach a larger audience. Businesses that want to create their own platforms and experience also need to make great investments and have the needed technology and knowledge to create the experience.

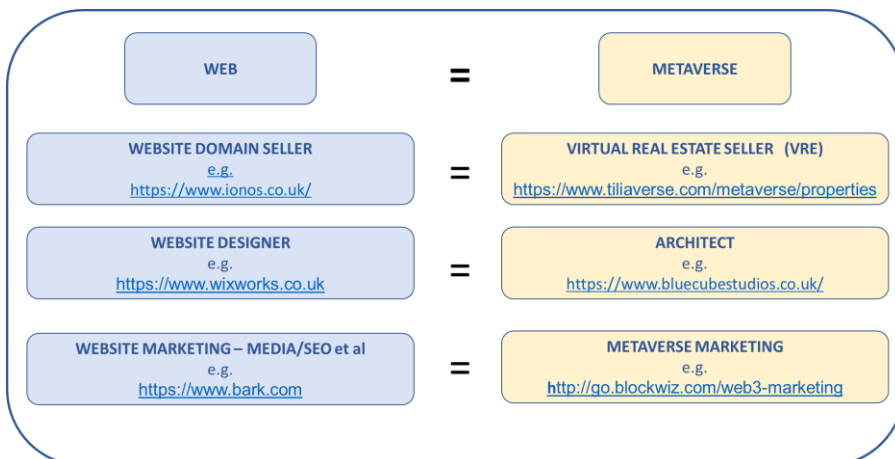
Moreover, businesses need to understand the metaverse and not come off in the wrong tone with advertising. To be successful, it should appear natural and fit in with the metaverse.

Cybersecurity can also be an issue in the metaverse. If businesses need a person to verify identity for a purchase, there is always a risk for data privacy. Metaverse identities can be stolen, and there is little support to help resolve issues.

<https://www.techtarget.com/whatis/feature/Marketing-in-the-metaverse-What-marketers-need-to-know>

Getting A Presence In the Metaverse?

At the time of writing it is not clear to the average organisation how to establish a presence in the Metaverse. Perhaps one way of looking at it is to see VRE as the "website" platform of the metaverse (rather than as a commodity to be invested in for the purpose of buying and selling) and on that "website" an "architect" (web designer) is employed to build it.



Then that platform can trade in a more traditional real world way but using the new creative tools available for marketing/comms if so desired. From that perspective it may be possible to calculate the cost of a presence on the Metaverse

Who is Already There?

The chart below shows the organisations which are to a greater or lesser degree already players in the metaverse. and “ players” may be an appropriate term as much of it appears to centre around the gaming sector

Metaverse Ecosystem Diagram



Overview of Owner/Developers, Seller/Traders. Marketers

Owner/Developers - The three groups outlined above appear to be the most active in the Metaverse. Because of its rapid rise it is still somewhat ahead of the national and international control and regulation mechanisms that will be required to provide an acceptable level of governance. That is currently entrusted to the ethical standards of those developing the technologies and platforms that drive the Metaverse and to that degree customers have to have a level of trust that their power will not be abused and that the Metaverse will not be the new wild west.

However technological development is an unstoppable train that has the power to deliver more benefits than negatives to customers in the future

Seller/Traders – Viewed by many as the riskier dimension of the Metaverse. Some of the historical ghosts, from the South Sea Bubble, through the Tulip Bubble to the Wall St Crash loom large and many analysts offer a “take care” warning for those engaging in this area.

Views supported by research that shows that in 10 out of 11 of the metaverse projects studied held their VRE/NFTs for less than 25 percent of the time the NFT collection had been live, and that 6 out of 11 held it for less than 15 percent, indicating that most VRE purchases are being made for the purpose of “flipping,” or holding assets for short periods of time with the intent to sell it quickly and make a profit. Exiger explains some of the other potential downsides

The VRE marketplace is exposed to the same risks as the NFT and digital assets market more broadly:

Cybersecurity: *Most assets are stored on “hot wallets” (internet connected) that can be hacked and stolen more easily than unconnected “cold wallets”.*

Fraud: *“Rug pulls” where the creators of the NFT/metaverse abruptly shut down the project and embezzle the project funds. This is especially risky when individuals are not involved in a registered marketplace or are a customer of a custodian.*

Intellectual Property Rights: *The biggest NFT platform, OpenSea, recently admitted publicly that over 80% of the NFTs on the platform are “plagiarized works, fake collections, and spam.”*

Market Manipulation: *“Whales” and the top 10% of traders alone perform 85% of all transactions and trade 97% of all assets, thereby having disproportionate control over the market.*

Scams: *A “Honey pot” scam is where the programmer of the tokens inserts code preventing the buyers from selling in the future.*

Insider Trading: *Actors in the market can use inside information to influence the market.*

Asset Valuation: *There is no market standard to fairly price and value virtual real estate, which makes it difficult to understand rapid fluctuations in the value of virtual real estate or identify potential abuses of asset valuations to mask other exchanges of value and beneficial ownership.*

Legal Disputes: There is no defined legal recourse or jurisdiction for disputes if something goes wrong.

Financial Crime: *Illicit funds can be introduced through various wallets, including crypto accounts lacking KYC or identity verification, prior to purchasing NFTs.*

Despite this multitude of risks, digital asset marketplaces (including VRE markets) continue to be highly unregulated spaces. The U.S. Department of Treasury, for example, has not issued any regulations specific to NFT markets or indicated whether NFT market participants are subject to anti-money laundering requirements – such as know your customer due diligence and filing suspicious activity reports. Until regulatory agencies create clear guidance and regulatory requirements, risk management for VRE investments is very much the responsibility of individual marketplace participants.

<https://www.exiger.com/perspectives/risk-management-in-vre/>

Platform Disappearance

Added to this is the risk of the platform on which the digital assets are stored failing to function for any one of a numbers of reasons. The storage technology could be destroyed accidentally or deliberately and it may need such an unfortunate incident to stimulate some regulation of the market.

Or it could simply become redundant and unsupported due to technological advance like punched tape, VCR, floppy disk, cassette tape, DVD et al.

Marketers – The creatives in “marketingland” have the chance to fill their boots with all the existing and emerging opportunities available for engaging and enticing customers to their brands. The Nothing-New-Challenge is for those responsible for analysis and positioning to ensure that the creativity is directed in a way that is accurate, effective and always relevant to the target audience especially as one to one communication becomes more possible,

So How Will The Customer Interface Be Managed?

Sarah Oneill in her article “ Metaverse Team” proposes that a whole new structure should be considered

Metaverse Research Scientist - Many major tech companies already have dedicated AR and VR scientists in their teams. But the metaverse needs a little bit more oomph.

Metaverse Creative - Metaverse creatives will be needed in order to concept and produce compelling metaverse experiences for brands.

Virtual Material Designer - Since a player's avatar will become a reflection of themselves, there will need to be companies, and professionals within that company, which will allow them to dress in the most up-to-date virtual garments

Metaverse Hardware Builder- The metaverse requires more than code. It needs people working on sensors, cameras and headsets. In order to make the experience realistic, hardware will need to be developed in order to create a multi-sensory experience.

Metaverse Planner -One there's a working Metaverse, the ability to plan and implement functionalities into a fully virtual world will be key for many companies. Plus, sifting out what will have a good ROI, and what is just jumping on the bandwagon, will be an important aspect of day-to-day decisions.

Metaverse Product Managers- Given that the metaverse market is expected to reach \$814.2B by 2028, there's a lot of potential for marketers. So, the professionals in this role will need to be able to conceive, create, and execute interactive ad campaigns in order to appeal to the younger generations.

Metaverse Business Development Managers -With the increasing number of companies getting into the space, brands will need to metaverse business development manager to keep up with the competition. To have in-depth knowledge of every offering out there, in order to identify profitable business opportunities. Plus, they'll need to lead development of partnerships in the space.



So is The Metaverse Here to Stay?

McKinsey in their quarterly article ***Marketing in the Metaverse: An Opportunity for Innovation and Experimentation*** suggest a range of reasons why the Metaverse will be a permanent part of the customer experience management future.

Six reasons the metaverse is here to stay

There's ample skepticism right now from people who think the metaverse is just a flash in the pan. That's also what some people thought about the internet during the 1990s. But then, as now, one thing was clear: although we didn't know which companies would shape this new technological evolution, consumers were flocking to it. Increasingly high levels of consumer adoption propelled fundamental change.

Similarly, the attraction of consumers to today's metaverse indicates a major shift in the way people use technology. If the metaverse is another evolution of the internet—something we are already in rather than something we observe from a distance—marketers clearly shouldn't miss out.

Here's why we think the metaverse has staying power.

Ongoing technological advances. *Technical challenges must still be overcome for metaverse experiences to be completely mainstream—for example, as a result of technical constraints, both Meta's Horizon Worlds and The Sandbox cap the number of participants for each session. But constant improvements in computing power allow larger virtual worlds to exist. Cloud and edge computing let intensive large-data processes, such as graphics rendering, move off local devices. The rapid adoption of 5G is enabling mobile devices to access these large worlds more easily and with lower latency. And the cost of production for augmented- and virtual-reality hardware is declining.*

Major investments in metaverse infrastructure. *In 2021, Meta invested \$10 billion in the metaverse. Other tech companies have also committed resources to building it—such as the recent launch of the design and simulation platform NVIDIA Omniverse and recent metaverse-friendly updates from Unity Engine, a game developer platform.. More and more companies, large and small, are keen to participate.*

A wider set of use cases. *Gaming in the metaverse already has mainstream traction. Consumer use cases are now expanding into new immersive retail, entertainment, sports, and educational experiences. Then there are the metaverse's sizable—but less talked about—enterprise applications and opportunities, including virtual employee training and team collaboration with avatars, virtual prototyping in manufacturing and construction, and virtual-showroom displays for products such as cars.*

Online commerce is mainstream. Already, omnichannel commerce is second nature to most metaverse consumers—payment credentials are often embedded in the devices and software they use. The virtual-goods economy accounts for more than 40 percent of global gaming revenues generated by the world’s billion gamers. In the future, the long-term rise of cryptocurrencies will make any requirements to set up crypto wallet accounts on metaverse platforms less of a barrier. Already we see innovation in both physical-to-virtual and virtual-to-physical transactions, such as ordering Domino’s pizza in Decentraland for deliveries of actual pizza in the real world.

Demographic tailwinds. The oldest Gen Z consumers are in their mid-20s. Increasingly, they are an income-earning force to be reckoned with. These consumers are more familiar with virtual worlds, transactions, and goods than previous generations are. Gaming is leading the way: 67 percent of Roblox’s 50 million daily users are under the age of 16, which could signal the coming of a whole new generation of metaverse natives.

Brand marketing and engagement are more consumer led. The shift toward individual content creators is evident in the more than 50 percent increase in influencer marketing over the past five years on platforms such as WeChat and Pinduoduo in China and YouTube and Instagram in the Western world. This shift bodes well for the growth of the metaverse: a significant share of innovative and engaging experiences will probably come from these creator–users.

<https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/marketing-in-the-metaverse-an-opportunity-for-innovation-and-experimentation>

How can Money be made in the Metaverse?

What customers are there for you? There are numerous articles available online regarding opportunities for monetising the Metaverse. The list shown below seems to encompass all of the current thinking many of which fall into the rather murky area of NFT, VRE and Crypto currencies. They are shown here more as a simplistic representation of the state of current published matter on the topic rather than a recommended course of action

My Millennial Guide provided the list below in “*How to Make Money In The Metaverse*”

1. *Buy And Sell Real Estate -The most common way to earn money in the metaverse is to buy virtual land and then sell it later at a profit.*

Of course, this method is not exactly easy since you have no idea how much people will pay for your land in the future.

2. *Trade Metaverse Token- A metaverse token is an open-source digital asset issued by and built on top of Ethereum (ETH). The token's value depends on the demand and supply in the market.*

3. *Play To Earn Games-If you love playing video games, why not earn money doing what you already love? Play-to-earn games are one of the most popular ways of making money in the metaverse.*

4. *Create An Online Store-One of the best ways to make money in the metaverse is to become an online shop owner. Many metaverse platforms have additional features and functions that allow users to buy and sell virtual items.*

5. *Participate In Concerts.-You can participate in concerts, shows, and movies, watch live gameplays and socialize with your friends and family. You can join discussions on blockchain, AI, gaming, and other technological topics. In addition, you can join virtual conferences and seminars and learn while making money.*

6. *Create And Sell NFTS- The Non-Fungible Token NFT market is booming, so if you're interested in creating NFTs, there's no better time than the present. You can create NFTs for anything—from a painting to a song to an animation. When you sell NFTs, you can choose whether or not to let other people mint from your work. Minting is the process of allowing others to copy your design. If you let someone else reproduce your NFT, you can get a percentage of the sales every time someone buys that design.*

7. *Rent Out Your Land Land renting on the metaverse is a great way to make quick money. This business has been around for some time now, and people prefer to rent land rather than buy it. You can find some companies built entirely on rented land. If you're interested in this business model, you need to understand how it works. You have to know your potential customers and what income you can expect.*

8. *Run eCommerce Business* -An eCommerce site will enable you to sell your products or services directly to other residents of the metaverse. The main advantage of an eCommerce site is that it puts you in direct control of your virtual business and offers you a wide range of options.

9. *Promote Businesses* - You can promote businesses like other people's business accounts in the metaverse. You will be rewarded for referrals and then rewarded further for conversions. You can advertise a firm within the metaverse or in real life and get paid on commission from sales. Promoting business doesn't require you to have any special design skills. But if you have, you can use it to create appealing visuals and images to help sell more and earn more.

10. *Metaverse Architecture* - As a metaverse architect and designer, you will be responsible for designing, building, and maintaining the virtual worlds of the future.

11. *Tutor or Educate* -Tutoring and education initiatives have become common in the metaverse, especially after the pandemic made schools close. Moreover, people with design, freelancing, coding, and other skills have managed to connect to learners and get paid for their services. So, if you have any skills that you offer in real life, you can join the metaverse to teach and earn money.

12. *Travel And Tourism* Travel and tourism have three types: domestic, inbound, and outbound. It can vary from traveling from one city to another (outbound) or merely a day trip from home to visit a nearby tourist attraction (domestic). You can earn by acting as a broker between travel agencies and hotels. You can also start your travel agency in the metaverse and sell your services to tourists.

13. *Test Products* -Many websites can pay you to test their products. You can assess anything from mobile apps to websites in the comfort of your home Also, as many products enter the metaverse, there is a high demand for testers who will help identify defects. For instance, clothing brands always hire testers to test their products before releasing them to the real world. Therefore, as a tester, you're guaranteed to earn money.

14. *Virtual Labor* -In the virtual world, people make money in almost identical ways to how they make money in real life. The only difference is that it's done online.

Similarly, data collection and virtual customer service jobs exist online and offline, and so does content moderation for online platforms.

15. *Host Events* -Hosting events in the metaverse is a lucrative business. As an event organizer, you need to ensure a great venue and all the necessary equipment for hosting the event. You also need to ensure having a good audience before holding your event. The event should be well organized by following all protocols from entry to exit of guests within your venue.

16. Sell Data - Every aspect of the business is now data-driven, which means that data is the hottest commodity in the market today. In the metaverse, developers and business owners need data before creating products. Also, advertising agents need your data to create tailored campaigns from your browsing and purchasing behavior. Therefore, if you can scrape data, you can sell it online. However, future regulations of the metaverse are expected to prohibit or limit the selling of users' data.

17. Create and Monetize VR Games- Because many people will see the metaverse as a new frontier, you can expect numerous opportunities to create and monetize engaging VR games. Let's say you want to create a user-generated content (UGC) site where people can sell virtual goods to make money. Alternatively, you can create a game that allows users to purchase credits or place bets and earn a percentage acting as security.

18. Invest In Cryptocurrency -invest in the cryptocurrency of a specific metaverse. Some examples are Decentraland (MANA), The Sandbox (SAND), and Cryptovoxels (VOX). The advantages of this strategy include that you can use the money to buy land in these metaverses. If the popularity of these metaverses grows, the value of their cryptocurrencies will also rise.

19. Invest In Metaverse Index -If you've got some coins to invest in, you may be interested in buying shares in the metaverse index fund. It comprises companies investing in blockchain and cryptocurrency. The goal of this fund is to solely invest in financial and technological players who are pioneering the blockchain industry. And they're hoping that their target investments will help create a new asset class.

They're fully invested in global companies that own or operate crypto exchanges, produce or sell crypto-wallets, provide crypto-related services, and maintain blockchain development platforms.

20. Do Freelancing Projects - The metaverse is a home for all types of artists. And what better way to take advantage of that than to do some freelance work? You can always take on paid projects if you're a 3D modeler, animator, or writer. You can start by sharing your portfolio online and on social media. You should also follow communities and groups in the metaverse where people regularly post their job offers. Freelance projects can be short-term, so you must be ready for them if you want to earn more in the long run.

Conclusion - There are many ways to make money in the metaverse. You don't need to be a professional designer to make good money—all you need is passion, drive, and luck. If you have any skills in the real world that you can take to the virtual world, then do it and earn money. There is one resounding takeaway don't try doing everything at once or spread yourself too thin. Start with what you feel most comfortable with, and build on your foundation.

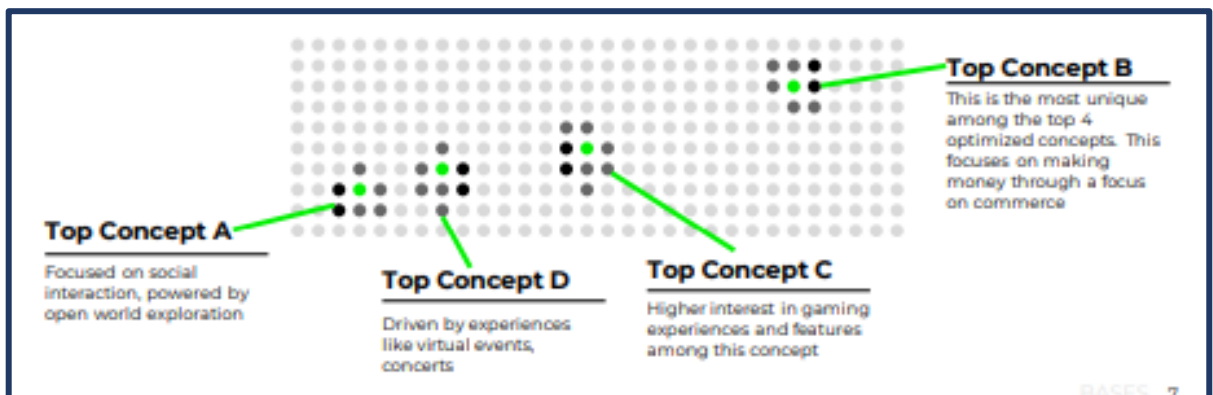
What are Customer Expectations of the Multiverse?

The Multiverse is still a relatively new phenomenon , not perhaps as mysterious to consumers thanks to almost 40 years experience of the internet and Hollywood’s creativity with future techno worlds of avatars and experiences of CGI virtual lands and experiences. It is however still new in terms of what the customer expects when engaging with the Metaverse.

Due, possibly to its relative mainstream infancy, there is relative little data about customer expectations and experience in contrast to the large quantities of information about its possibilities and opportunities. However one piece of very interesting data from Neilson IQ in their report “*Co-Creating the Metaverse*” provides some insight into what customers are expecting .

The Key highlights are

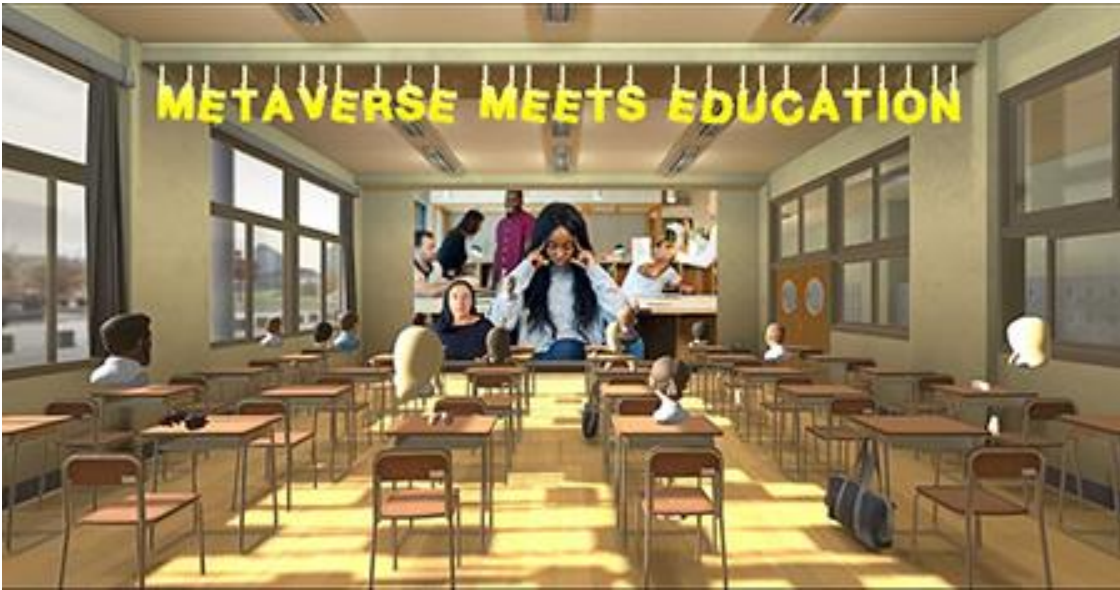
- *There are many metaverses, not just one...*
 - *Imagine a universe where the home-bound can travel the world, the mobility-impaired can hike mountains and globally dispersed communities can share common interests and experiences in one virtual setting.*
- *We are witnessing a new era of digital change*
 - *If you think the metaverse is only for gaming and gamers—think again. We are witnessing a new era of digital change, one that is introducing new ways to engage and interact with consumers.*
- *A projected \$1 Trillion industry by 2030*
 - *If you are a developer already deep in the space, a brand manager looking for new partnership opportunities, or just a consumer looking to be more informed, there are many reasons to be in tune with developments in this space.*
- *Setting out to co-create consumers’ ideal metaverse experiences*
 - *As we explored potential metaverses, different clusters began to emerge*
 - *From this we identified four top concepts among specific consumer clusters, evaluating them to ultimately understand the fundamental question:*
 - *What experiences are consumers looking for?*



- *Freedom to explore a flexible metaverse is paramount*
 - *In terms of how consumers are looking to engage with a metaverse, the flexibility and freedom of an open world experience is desired across the board*
 - *Specific events, such as concerts, are also important*
- *Outdoor exploration and virtual travel are widely relevant*
 - *Virtually exploring outdoor recreation was a very compelling option, especially for people who want to experience things but don't have the means to travel. This type of experience also could help with physical limitations or trying to avoid things like COVID or the difficulties of crossing borders to see natural formations.*
- *Self-improvement through further education is also of interest*
 - *education classes, many also noted a specific desire for virtual exercise classes. It's no secret that at-home fitness has evolved considerably after the past couple years, and people recognize the vast opportunities that the metaverse can offer to further evolve this growing industry.*
- *Commerce is a strong motivator toward engaging with the metaverse*
 - *While transacting in a virtual marketplace did not rise to the very top of the specific experiences people were interested in, consumers clearly identify it as a key reason for potential engagement with a metaverse.*
- *While the buzz is on pay-to-play, free-to-join options are still the quickest path for adoption*
 - *When presented with a purchase decision, a free-to-join, choose-what-you-pay-for method is clearly preferred by all groups. This type of low-risk entry cost would allow consumers to try a metaverse with little to no risk and so long as that metaverse provides the experience(s) they're looking for, the chances for success and high engagement rise.*
- *Flexible ways to access the metaverse are popular*
 - *Consumers are looking for multiple options for accessing a metaverse. Screen accessibility is critical, as access through any traditional screen significantly outperforms other options.*
- *Cryptocurrency is polarizing but provides future benefit*
 - *While it is possible for metaverses to exist without blockchain, but as blockchain (and NFTs) open the path toward a more decentralized metaverse and true digital ownership they should be considered*

Consumers are most receptive to a metaverse with a focus on virtually exploring outdoor recreation, attending virtual education classes, engaging with like-minded communities, and/or transacting in a virtual marketplace. Allowing those that are likely to engage access through any traditional screen will allow the broadest audience to access a given metaverse. Low risk entry via a free-to-join, "choose what you pay for" metaverse will also appeal to the broadest audience.

Following on from the point in the Neilson Report highlighting “Self-improvement Through Further Education” it appears the Metaverse creates an outstanding opportunity for education of customers and the development, learning, skills and qualification of employees at every level. In its study “Education Meets the Metaverse: Reimagining the Future of Learning” Sheila Jagannathan, Head, open learning campus at the World Bank Group identifies the available possibilities



The learning industry has come a long way from the PC internet boom that gave rise to eLearning in the late 1990s. The second wave of mobile computing and social media ushered in microlearning through shorter, video-based learning on demand. Industry watchers are now suggesting that the third era of computing is upon us. Flat static pages on the PC and phone will be replaced by a metaverse of digital 3D spaces, where we interact as lifelike avatars. The metaverse is an embodied internet where you're never alone. Unlike a Zoom call that is scheduled and disappears when you're done, the metaverse is "always on" and affords social interactions with peers. This transition has profound implications for capability-building and learning.

A New Way to Teach and Learn

VR engages the brain's motor system and builds muscle memory. Just like a flight simulator prepares pilots for emergency landings, VR can train anything, from farming skills to fire fighting. Skills that play to the unique strengths of the metaverse include spatial training, such as involving the hands and body for tasks that are too dangerous, expensive, inconvenient, or simply impossible to practice in real life. Other examples include simulating scenarios for routine and abnormal operations, emergency response, stressful workplace situations, critical procedures, and high consequence events—all in a safe and controlled environment that can then be repeated until it becomes second nature.

6 Ways the Metaverse Can Positively Impact Learning and Capability Building

. Learn and connect in an immersive virtual campus

Before and during COVID-19, learning had already begun to move from physical classrooms to more virtual and blended spaces. The metaverse facilitates an immersive campus life, where learners wearing VR headsets enter the virtual campus or university to learn, explore, and socialize. In this digital space, for example, learners can delve into different learning pods, visit libraries and breakout rooms, meet coaches and counselors, and hang out with peers.

These digital experiences can truly democratize education, by bringing people from geographically dispersed locations and varied economic backgrounds together to learn, in a cost-effective, flexible, and quicker duration. For example, in September 2023, the planned Kenya-KAIST virtual campus located 60 kilometers from the capital city of Nairobi will allow the institution to extend their reach across continents, allowing students to learn together on cutting-edge topics without having to leave their home countries.

2. Enhance real-world skilling in Virtual and Hybrid environments

The metaverse provides experiential, embodied skilling opportunities using real-world scenarios and high-pressure situations, where you can make mistakes without consequence. When well designed, it combines VR with data science and spatial design to improve learner engagement, confidence, and application. Some examples of the benefits of training in the metaverse include:

- Experiential learning. Pharmaceutical leader Novartis trains life-saving lab skills with high-fidelity, multiplayer VR simulation. Students step into a virtual lab to interact with instructors and practice welding tubes, removing bag caps, and labeling bags with unlimited do-overs.*
- Deliberate practice. The metaverse provides intense practice and feedback loops, where learners practice many variations of a concept to hone skills. Walmart's Spark City game is different every time the game is played. If customers appear within 10 feet, players have to ask if they can help, but not before they've addressed spills and other safety hazards.*
- State-dependent learning. Providence Health triggers psychological stress of responding to microaggressions in the workplace. A live actor captured in 3D volumetric video appears through the camera lens of your phone or tablet as a hologram standing in the room in front of you, for learning and retrieval taking place under the same conditions.*

3. Explore different worlds through visualization and storytelling

Visualization and storytelling are two hallmarks of a metaverse learning experience and much needed today after the profusion of boring Zoom experiences during COVID-19. Through VR technology, learners can step into an entirely different world or into another person's shoes. For example, health care leader DaVita builds patient empathy by using an interactive, multi-sensory first-person story.

Stepping into metaworlds facilitates visualization of scenarios, including complex development challenges. For example, a learner can use a VR headset to examine a street transformation in South Asia or explore life in a green Smart City. Through bite-sized 360 degree stories, virtual tours, and visualizations, learners "enter" crucial global development challenges, including climate change, education, gender, urban development, international trade, and public health.

4. Build human capabilities in interpersonal or difficult situations

Training staff for soft skills, such as communication, leadership, listening, and empathy is hard to achieve and also measure. The metaverse facilitates this by immersing learners in real-world conflicts and allows them to practice their soft skills in a safe environment, for example, having sensitive or difficult conversations with employees or customers.

For Verizon staff, safety training scenarios concerning robberies can create a sense of danger and overwhelm. By using VR, Verizon helped over 22,000 associates across 1,600 stores train for this complex scenario; the company reported that 97 percent of those trained said they felt prepared when put in such dangerous situations.

5. Improve accessibility for people with disabilities

The metaverse holds promise to improve educational and social access for people with disabilities. For example, an immersive environment offers young adults with special needs, autism, and social interaction issues the ability to improve their interpersonal and job skills, such as visiting a mall or grocery, shelving products at a store, or loading goods in a truck. Through VR apps, they can practice skills and interact with others in a safe environment without feeling overwhelmed or anxious.

VR can also help those with mobility or anxiety issues to improve their quality of life. For instance, the Starlight charity uses VR technology to give pediatric patients the chance to "escape" the walls of their hospital room and be transported into another world. Through VR goggles, they experience playing soccer, hanging out with friends, or visiting faraway places.

6. Increase data capture on learning performance

Using the metaverse to create immersive learning experiences allows organizations to collect hitherto untapped data to gain insights into learner behavior to track progress, identify gaps, and continuously improve the learning experience. Useful data on learner actions includes usage, performance, attention and engagement, sentiment, and predictive analysis. Teachers can also play a more active role in collecting data and analyzing lessons on the effectiveness of such environments for learning. For instance, hand movements are tracked in Pfizer, Novartis and Bristol Myers Squibb's pharma sims. If users cross their hands or angle them the wrong way under the biosafety cabinet, the sim immediately provides feedback and starts over. Every digital footprint can be measured and a dashboard of telemetry data can provide actionable insights to improve the simulation experience.

The metaverse literally means “life” after the internet. Early applications of this new way of learning include virtual campus activities, 3D simulations, and gamified activities. This is only the start—through this technology there are boundless opportunities to reimagine and democratize education in novel ways.



Educating Customers

The Metaverse also creates the most dynamic opportunity yet for educating customers. Information and knowledge are key ingredients in the formula for creating a positive customer experience. From the “Push” perspective the Metaverse offers organisations the capability to be able to showcase not only the features and benefits of their products or services but also demonstrate every aspect of their use and care. From the “Pull” perspective the Metaverse offers the capability to manage the on-demand needs of customers in new interactive ways.

In the field of medical care the scope for the development of patient/practitioner practices presents a major opportunity.

Data and The Metaverse

Just how data collection will work in the metaverse is still not completely clear as By Michael Fisher | Chief Executive Officer of 3Radical explains in his article *Data in the Metaverse Here's What You Need to Know*

The gathering of consumer data is a notoriously fraught topic. Here's a look at how things might get even messier when the metaverse goes mainstream – and why marketers should care.

f the current version of the internet is anything to go by, consumer data in the metaverse is going to be a complicated topic. The metaverse will pose an opportunity to deliver uncharted levels of personal data collection to marketers. At the same time, the adoption of web3 and decentralization will put greater control and ownership of that data back in the hands of consumers.



The metaverse is likely to introduce new possibilities for the collection of personal data / Adobe Stock

Customer data in the metaverse

User data will almost certainly remain a sought-after item in the metaverse. Customer data is used to create personalized experiences today, and this is only likely to increase. As Mastercard's chief privacy officer Catherine Louveaux recently put it in a blog post: "The metaverse will be data collection on steroids."

And we're not just talking about contact information here. The metaverse opens the door for the collection of sensitive biometric data. This is already happening with facial recognition and fingerprint technology included in many mobile devices, but these features are currently on an opt-in basis. Many AR and VR technologies require the tracking of bodily movements – such as eye position – as part of their general use.

The next level of customer data is biometrically inferred data (BID). These datasets come from information inferred from behavioral, physical, psychological and other non-verbal communication methods. Together with AI-based predictive modeling techniques, BID presents a new realm of possibilities for targeting audiences.

Faced with this, is it possible for metaverse users to have any control over their data at all?

Decentralization and the rise of web3

Facebook's parent company Meta is not the only one trying to establish ownership over the metaverse. As it currently stands, Microsoft, Google and other Big Tech companies are looking to build walled garden environments. In these gardens, all customer data will inevitably be sent back to the company running the show, limiting user control over their own data.

However, the true promise of the metaverse is decentralization through blockchain technology. Sam Huber of Admix, says. "We will see how it evolves, but I believe we will end up with various 'worlds' that collectively form the metaverse."

The blockchain infrastructure of web3 shifts the power away from companies, meaning no one actor is able to host all data. Consumers have a more active role in deciding which brands they share their data with.

Quality over quantity – even in the metaverse

I believe in quality over quantity when it comes to customer data. The metaverse opens up the possibility of unparalleled levels of personal information. However, the fundamental challenges of current data policy will not simply go away.

Data is only as useful as the insight and actions that marketers can glean from them. If companies can't even use the reams of data they already have, is more granular data going to be useful? Our 2022 Consumer Survey showed that the majority of brands are still not delivering true experiential personalization and are therefore not making the most of their current datasets. More data is not going to help with this. Marketers must learn to deliver the right message, at the right time, in the right digital space in order to maximize their ROI. The same rule will apply in the metaverse.

<https://www.thedrum.com/opinion/2022/07/21/the-metaverse-and-consumer-data-here-s-what-you-need-know>
<https://www.thedrum.com/opinion/2022/07/21/the-metaverse-and-consumer-data-here-s-what-you-need-know>

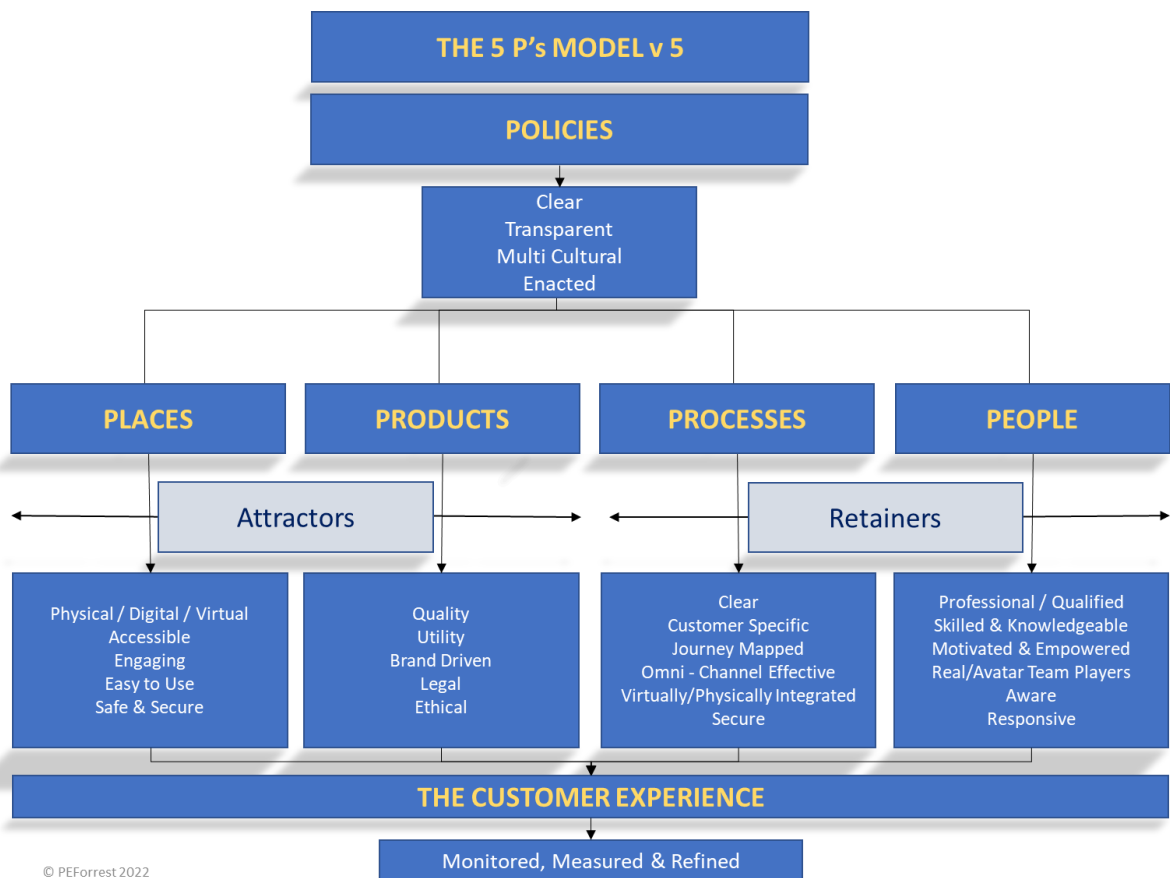
The 5 P's in the Metaverse

The metaverse in its current early development is a potentially confusing environment so are there and traditional analogue anchors that provide some kind of map and compass to assist those responsible for managing the metaverse customer experience?

The 5P's model developed in the late 1980's from a project at Brunel University London by P E Forrest, President of icxi.com, has been the time proven platform for managing the customer experience in every sector for organisations of every size. It has also been provided the foundation for The International Customer Service Standard (TICSS), The International Customer Experience Standard (ICES) and the newly launched International Digital Customer Experience Standard (IDCXS). These standards are independently audited globally by The British Standards Institution (BSi) and are held by thousand so organisations around the world.

Over time the 5 P's model has been updated to address the evolving environment of customer service. The model has been revisited in the light of the emerging Metaverse to Version 5 and the initial conclusions are

1. That its structural validity is applicable to customer experience management in the Metaverse
2. It has increased value as a diagnostic means of navigating through the blizzard of information regarding the potential and opportunities of the Metaverse
3. It continues to provide a foundation on which the customer journey can be planned and the experience analysed.



The Final Word

It has been said the while customers browse and explore the internet, they engage and experience the metaverse. That may be an oversimplicity but there is no doubt that the metaverse in one form or another will be an ever-growing influence on organisational behaviour, performance and results. Knowing their target audience even better is a fundamental success factor. The degree to which they are able to take their customers with them on the journey is likely to be a key factor in the level of success they enjoy. If the target audience is 100% Gen Z (see ICXI Post Newsletter Vol 2 Issue 3) then more creative and exciting approaches may be very effective if the target audience, and the revenue it provides, is a mix weighted towards the Baby Boomer end of the scale a more measured evolutionary approach may be more effective. Like the internet before it the metaverse has the potential to generate a Cambrian Explosion like phenomena out of which many will not make it onto the first step of the evolutionary ladder.

Without doubt the opportunity is big and appears to be getting bigger, how to access it is less clear with much of the advice information centred around the gaming sector. PwC, the worldwide accounting and advising firm estimates that virtual reality and augmented reality will enhance the global economy by \$1.5 trillion by 2030, up from \$46.5 billion in 2019. A J P Morgan report states that sales of virtual goods are already a \$54 billion market almost twice the figure spent on music.

The major corporations will continue multi million-dollar investment in developing the metaverse market place, for that is essentially its primary function. Whether the organisations in that space are in the creative marketing/comms or the riskier trader sector the watch words appear to be proceed with caution, take small steps and take your customers with you.

Like the internet the metaverse has the potential to bring great benefit to human kind from the customer perspective the hope is that it fulfils that possibility but at the moment it appears to be more about the content it enables rather than having an easily available infrastructure for those wishing to enter it.

Highly Recommended Reading

<https://www.rahmanravelli.co.uk/expertise/nfts-non-fungible-tokens-risks-regulation-and-the-law/>
<https://techwireasia.com/2021/12/want-to-trade-nfts-best-beware-the-risks/>
<https://www.forbes.com/sites/phillipbraun/2022/02/24/why-nfts-are-harder-to-value-and-trade-than-cryptocurrencies/?sh=62407fce2f07>
<https://www.exiger.com/perspectives/risk-management-in-vre/>
<https://nielseniq.com/global/en/insights/report/2022/what-consumers-expect-from-a-metaverse-experience>
<https://www.jpmorgan.com/content/dam/jpm/treasuryservices/documents/opportunities-in-the-metaverse.pdf>

Recommended Reading

<https://csmtimes.com/price-of-virtual-real-estate-on-the-metaverse-soars-879-percent-in-18-months-study>
<https://blog.cryptostars.is/virtual-real-estate-is-scarce-but-df44fbf3a25d>
<https://blog.cryptostars.is/metaverse-and-real-estate-market-336192e099c2>
<https://www.gartner.com/en/newsroom/press-releases/2022-02-07-gartner-predicts-25-percent-of-people-will-spend-at-least-one-hour-per-day-in-the-metaverse-by-2026>
<https://www2.deloitte.com/us/en/pages/technology/articles/what-does-the-metaverse-mean.html>
<https://inovatorstrend.com/innovations-around-the-world/>
<https://cointelegraph.com/metaverse-for-beginners/what-is-metaverse-in-blockchain>
<https://www.ibm.com/uk-en/topics/what-is-blockchain>
<https://www.weforum.org/agenda/2016/06/blockchain-explained-simply/>
<https://insidetelecom.com/who-really-owns-the-metaverse/>
<https://www.rubyhome.com/blog/metaverse-real-estate-stats/>
<https://www.lxahub.com/stories/the-future-of-data-in-the-metaverse>
<https://www.techtarget.com/whatis/feature/Marketing-in-the-metaverse-What-marketers-need-to-know>
<https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/marketing-in-the-metaverse-an-opportunity-for-innovation-and-experimentation>
<https://www.mymillennialguide.com/how-to-make-money-in-the-metaverse>
<https://olc.worldbank.org/about-olc/education-meets-the-metaverse-reimagining-the-future-of-learning>
<https://www.itu.int/hub/2022/06/ai-driving-force-metavers>
<https://www.lxahub.com/stories/who-do-you-need-to-hire-for-your-metaverse-team>