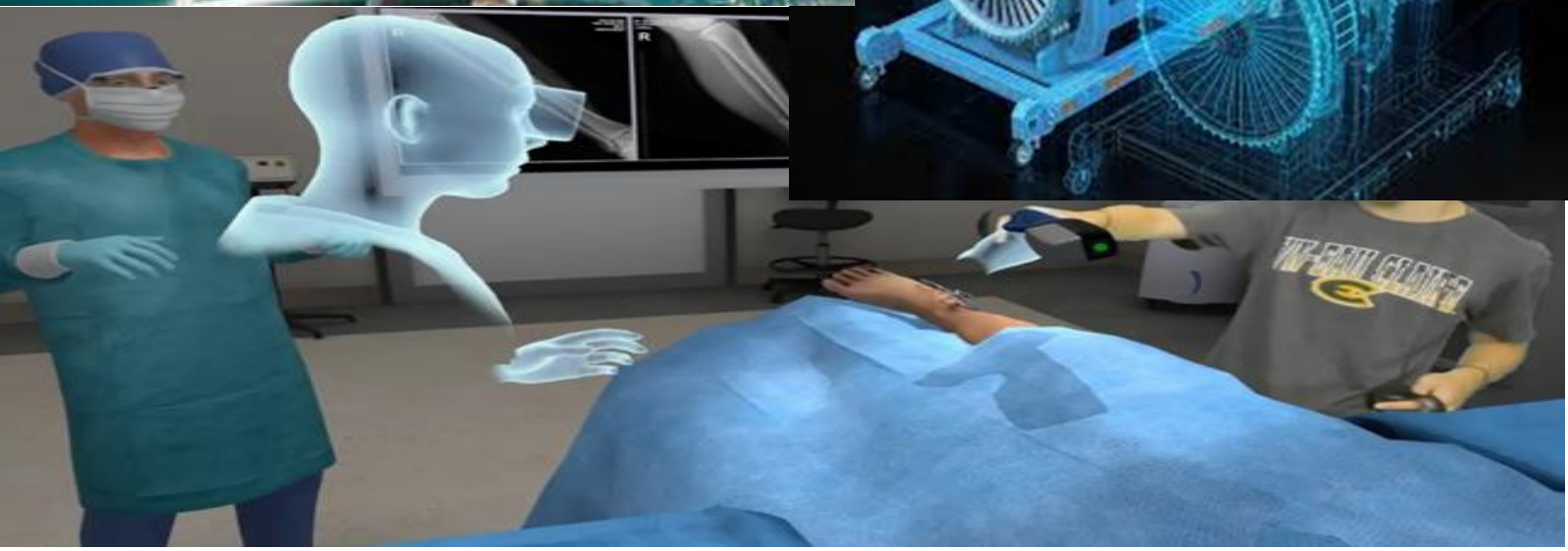




Metaverse – Implications for the Health, Fitness, and Wellness Industry Whitepaper

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About the Author

Robert has had a varied career spanning health and fitness, strategy consultancy, and academia. Currently he works in an international strategy director role for one of the largest fitness solutions providers in the world. He has a BSc in Sports Science and Management from Brunel University and an MBA from the University of Lincoln. He did his doctoral studies in marketing at a university in Hong Kong.

He is the author of 2 books. Marketing Professional Services in Asia (Lexis Nexis, 2009) which was called one of the most indigenous books on Asian marketing by Professor Oliver Yau (Chair Professor of Marketing at City University HK) and Developing a Profitable Practice in Asia (Ark Group, 2010).

He has also published over 50 articles in various newspapers and magazines on the topics of strategy, marketing, and leadership. He has spoken at numerous events as a keynote speaker or panelist around Asia and globally.

His strengths lay in strategic thinking, action, and execution, creating more agile and change capable organizations.

Robert is a keen sportsman having played professional football. He still hits the gym 5x week and plays rugby.

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Introduction

It seems like everyone is trying to figure out what the metaverse is and what it may mean for them. There are some who believe it is hype and many more who believe it will be a fundamental part of business as usual – but by when is unclear. McKinsey research suggests that the metaverse could be worth US\$5 trillion by 2030. Gartner predicts that 25% of people will spend at least one hour per day on the metaverse by 2026.

According to a new study by PwC, two thirds of company leaders have moved beyond experimentation and within a few years, the metaverse will be an integrated part of their business. Whilst this sounds impressive, PwC state that it's important to keep in mind that the “ultimate” version of the metaverse (fully immersive, with seamless and secure transitions among a multitude of metaverse environments) doesn't exist yet. Some metaverse elements are entering everyday business activities, but it is still in the early stages.

The key question for many businesses is in what form and what aspects of the business. One obvious way would be the potential to enhance collaboration. KPMG U.S. and Canada are opening a metaverse “collaboration hub” to connect employees, clients, and others with Web3, a so-called decentralized version of the internet built on blockchain, the firm says. It's collectively making a \$30 million investment this year in Web3 experiences, with the metaverse “hub” as the “signature piece.” “The way we look at it, it's not just augmented reality and virtual reality. It's really the next iteration of the internet. It really encompasses everything that the internet would encompass, but it's more interactive,” Cliff Justice, KPMG U.S. leader of enterprise innovation, told *Fortune* of the metaverse and Web3.

101 Blockchains WEB 3.0 VS METAVERSE		
Criteria	Web 3.0	Metaverse
Definition	A new iteration of the internet focused on creating a decentralized web, where users can own and control the content and assets they create.	A digital space that would blend virtually augmented physical reality with physically persistent virtual spaces.
Underlying technology	- Blockchain and cryptocurrencies - DAOs - NFTs - DeFi	- Connectivity technologies - Human interface - Decentralization technologies - Experiences - Creator economy
Scope of applications	Applicable throughout the web.	Still under development, and potential areas of application are still under scrutiny.

(Source: 101 Blockchains)

The metaverse and Web3 are related but distinct concepts. According to Forbes magazine in an article from Feb 2022, Web3 is a decentralized internet which is built on distributed technologies like blockchain and decentralized autonomous organizations (DAO) rather than centralized on

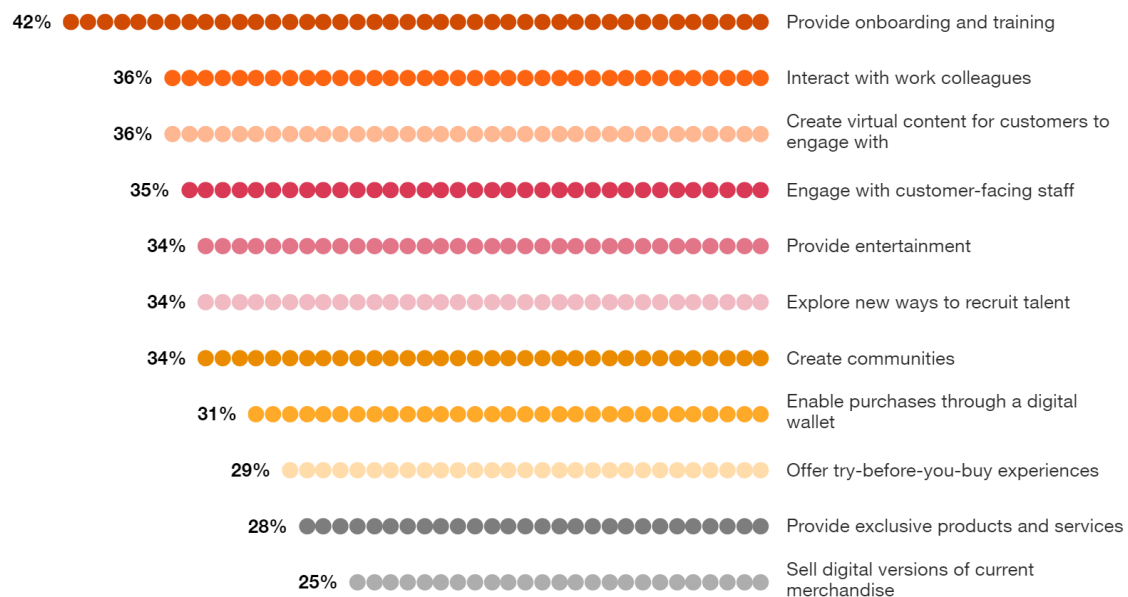
servers owned by individuals or corporations. The metaverse on the other hand, is really, at the moment, a shorthand for virtual worlds, where users can interact with each other and engage with apps and services in a far more immersive way. The term “metaverse” first appeared in Neal Stephenson’s sci-fi novel Snow Crash, where it described a virtual reality world.

Numerous brands are now creating some type of immersive experience in the metaverse (MV) such as Gucci, Ferrari, Adidas, Nike etc as well as fitness brands many in the industry would be familiar with such as Stages, Trib3, Go24, and Gym Aesthetics. Gym Shark was another using the MV for virtual meetings and recently Bill Gates predicted that all remote meetings will be held in the MV.

Below is a sampling of the types of categories of experiences brands are offering in the MV.

Brand/Entity Example	Experience Offered	User Outcomes	Main value proposition and other examples
Roblox	Online gaming platform and virtual world	Users can create and engage in games created by others. It is free to play plus there are in game purchase using the Roblox NFT called Robux. It has over 160m users and also acts as a platform for other brands to create experiences such as Nike Land	Gaming platform Gdevelop Hiber Flowplay Epic Games Unity Second Life
Nike	Nike Land – broad range of brand experiences including socialising and using avatars	Using the Roblox platform, Nike claims some 7m visitors since Nov 2021. Users can move across Roblox platform, interact with avatars, engage in activities, receive NFTs and interact with celebrities and Nike products (sold US\$3m of NFT sneakers in 6 mins)	Virtual World/Platform Disney Decentraland Selfridges Hyundai LV Spotify XiRang
Gucci	Gucci Garden – a virtual experience of the brand’s heritage	Users can experience the brands philosophy and buy limited edition virtual goods such as bags, sneakers using Robux (Roblox NFT)	Brand Experience Coca Cola Christies Ferrari Planet Hollywood NBA Vatican
KPMG	Collaboration and HR processes	Using virtual spaces (some even digital twins) for meetings, training, and other collaborative needs	Collaboration and Training BMW, Peugeot Havas Group Shell ErsteBank Bosch Japan Airlines

Balenciaga	Partnership with gaming	Partnered with Epic Games. Created branded in game accessories, store, and ads	Gaming Tie Up Wendys Microsoft Tommy Hillfiger Clarks
Fashion Week	London fashion week virtual experience	With only 50,000 IRL attendance, fashion week had some 250,000 attend in the MV	Events Crypto Fashion week Fabric of Reality Justin Bieber Snoop Dogg Manchester City
McDonalds	Virtual goods	Offering virtual food and drink as well as downloadable files such as audio, video, and NFTs	E comm Balenciaga Selfridges Warby Parker Amazon Room Decorator
STEPN	Move to Earn (M2E)	Offering rewards for physical activity in the form of in game currency. Running on the Solana blockchain, users purchase sneakers on the app that fit with their exercise type	Gamefi - M2E, P2E Dotmoovs Genopets Step Olive X Wirtual



What Do Businesses Plan to do on the Metaverse? (Source: PwC 2022 US Metaverse Study)

Clearly the MV has moved beyond its often-stereotypical description of a gaming platform (using some kind of VR and/or AR). There are a number of potential avenues for firms to explore ranging from experiences to pure e comm plays (and a host of options in between). A digital Gucci handbag sold for over \$4000, more than the real version and over 45 million people saw Travis Scott's show. Hardware that includes AR and VR will continue to grow with Statista stating that global shipments for these devices will reach over US\$75m by 2024. Depending upon which source you look at, there are some 400m unique monthly users, the vast majority (over 80%) are under 18. This is an interesting fact when one considers you often need a digital wallet to engage and legally you need to be over 18 to buy and sell crypto. This number is probably skewed by the dominance of gaming on the MV as we see a continued growth of major brands entering.

Online Game Makers	Design Software Vendors	Social Networking	Gaming, AR & VR Hardware	Live Entertainment
 Roblox	 Unity	 Facebook	 Facebook	Live Nation
 Epic Games	 Epic Games	 Tencent	 Lenovo	Theme Parks
 Microsoft	 Adobe		 HP	Sports Teams
 Activision Blizzard	 Autodesk		 Logitech	
 Take-Two	 Ansys		 Acer	
 Tencent			 Valve	
 NetEase			 Razer	
 Nexon				
 Valve				

Metaverse Competitive Landscape (Source: Influencer Marketing Hub)

According to JP Morgan:

- Every year US\$54b is spent on virtual goods, almost double the amount spent on music
- 60b messages are sent daily on Roblox
- \$80m was paid to creators on Second Life
- NFTs have an approx. market cap of \$41b
- 200 strategic partnerships with the Sandbox

What are Health and Fitness Brands Currently Doing in the MV?

One of the obvious applications of an immersive experience is clearly that of physical activity. The cost of inactivity to the economy is estimated at over US\$70b. Covid has certainly heightened awareness of the need to move and improve overall wellness. The challenge for most is that many forms of exercise are just unappealing, and they lack the motivation to form a regular habit. Research from Dr Katy Milkman and her team at Wharton (<https://gen.medium.com/how-goes-the-behavior-change-revolution-7bf792dd43c9>) has underlined how hard it is to create interventions that create long lasting behaviour change when it comes to physical activity. In the commercial club sector, penetration rates have tended to stall at around 20% in the more mature markets (North America, some parts of Europe) and the sector still faces considerable challenges in member retention. The overall objective of the health and fitness industry now seems to be more focused on growing the overall pie. The MV could be a part of this solution, not only for those offering exercise, health, and wellness experiences but also for those who supply this sector (hardware, solutions, programming).

OliveX is one of the most prominent players in this arena. Combining fitness, gaming, and blockchain, the company claims to be creating the first fitness metaverse, what they call fitness 4.0. They created the first ever run for reward game on blockchain called Dustland Runner and they have their own token called Dose. In addition, OliveX has developed an immersive game experience called Zombies Run. It is partly owned by Animoca brands which holds investments in some 50 blockchain game companies and has partnerships with prominent brands such as Disney, F1, and Marvel.

One area of particular interest is their ability help brands integrate into the Sandbox metaverse. Using the land which they own, they help fitness brands create revenue streams through NFT sales, social hubs (building community) and hosting events. Below are some of the brands OliveX is helping integrate into the MV.

TRIB3 (<https://trib3.co.uk/>) - HIIT workouts and innovative style of group fitness classes delivered in the digital world along with the first ever TRIB3 NFTs (non-fungible tokens). They join global giants such as Adidas and Team GB by entering The Sandbox. TRIB3 CEO Kevin Yates, says of this historic partnership: "This is a landmark opportunity for our brand and our sector, and we are proud to be first to be grabbing it with both hands. This partnership will see us fuse the TRIB3 design and brand team's talents with OliveX's experience and vision, so I am confident that the TRIB3 experience in the Fitness Metaverse will be quite literally out of this world".

Stages (<https://stagescycling.com/>) - The deal with OliveX Fitness will see Stages Cycling's range of smart bikes, power meters and indoor cycling classes made available to user, as well as virtual avatars, apparel and branded NFTs through the game Dustland Runner.

GO24 Fitness HK (<https://www.go24fitness.com/en>) – this will see the GO24 fitness offering replicated in the metaverse, allowing users within The Sandbox to experience fitness experiences digitally, including its popular "BURN24" total body, high-intensity workout and other group classes. GO24 Fitness Co-Founder, Martin Barr, said of the new partnership: "This is a fantastic opportunity for us to take GO24 to the masses and encourage more people to become more active."

"It is still early days insofar as the metaverse is concerned. There are many metaverses, and there is no clear winner. And from what I hear from gamers, the current UX for most metaverses isn't up to what would entice gamers and hold their attention. I'm confident that will change radically in the near future. I believe the fitness industry needs to keep a close eye on how the metaverse develops, and to take the time to understand the full extent of what the metaverse can offer. It is so much more than online fitness classes.

In the meantime, these are some immediate takeaways: The gaming industry is extremely competitive, and it caters to an even younger demographic whose attention span is significantly shorter. As a result, the gaming industry has had to devise creative ways in which to attract, and to retain, users. The fitness industry can certainly learn from the gaming industry in this respect. Also, the new members that are going to be walking through our doors in a few years will be completely comfortable with a seamless integration of the physical and virtual worlds. We need to make sure our fitness businesses appeal and cater to them too."

**Sean Tan – President,
Singapore Fitness Alliance**

Other examples:

STEPN (<https://stepn.com/>) – they claim to be trying to revolutionize the health and fitness industry. Pioneering the M2E space, STEPN app uses move-to-earn NFT sneakers to track players' movements outside based on the GPS signal from their mobile device.

Equinox (<https://www.equinox.com/>) – entered the cryptocurrency world by accepting payment in cryptocurrency for its all-access and destination memberships at its New York clubs. The company began accepting cryptocurrency payments in May 2022.

Genopets (<https://www.genopets.me/>) - a role-playing game that combines elements of the Tamagotchi digital pet and Pokémon Go battle games with fitness and social incentives. The game uses data on a player's real-world physical activity generated by their mobile or wearable device to determine their progression through the in-game metaverse. Genopets are NFT virtual pets that become more valuable as players customise and upgrade them while they move through the Genoverse. Players bank the steps they track to unlock in-game features and abilities.

Wirtual (<https://wirtual.co/>) – started of as a trial platform to hold virtual fitness events. Now incorporating cryptocurrency, NFT avatars and a tracking system connected to smart watches such as Strava, Fitbit and Garmin. Users receive rewards for tracking and submitting data on their physical activity, with challenges covering running, walking, swimming, dancing, working out and cycling.

Adidas (<https://www.adidas.com/us/metaverse>) – Adidas Originals joined the Bored Ape Yacht Club with their first NFT. The Bored Ape Yacht Club is a collection of 10,000 NFTs that grants benefits from merch drops to events. Users can claim physical merchandise with their NFTs (only paying the gas fees). Adidas is promoting its latest Ozworld shoe collection with AI-generated digital avatars for the metaverse. Virtual being platform Ready Player Me produces the characters based on the answers to a personality test. Users can then explore the metaverse with the resulting three-dimensional digital characters.

Alo Yoga (<https://www.aloyoga.com/>) - In collaboration with online gaming platform Roblox, Alo Yoga launched an immerse space for yoga, meditation, and mindfulness practices. The space, called the Alo Sanctuary, is free and available now on Roblox's platform. In the virtual space, users can shop at the Alo store, practice yoga, and meditate.

Les Mills (<https://www.lesmills.com/>) - Les Mills launched a BODYCOMBAT VR app that takes the popular martial arts workout into the metaverse for a gamified workout.

"The hype behind the metaverse reminds me of the let '90s hype around e-commerce. At the time, the concept and vision was phenomenal but it took years for the technology and business operations to catch up, and for consumers to settle into the convenience. Therefore, I don't think fitness needs to knee-jerk react to it, instead we should let the obvious winners in this space – the big techs – thrash it out and then fast follow.

I have no doubt that the metaverse will have a place in society and gyms will need to figure out where to play and how to win but I think right now the real value isn't visible as we don't know what we don't know. There are a number of obvious use cases of merging physical services into digital versions, making gaming more active and appealing to a potential new market, all of which will make a positive impact. But my honest opinion is let's just sit back and watch the evolution of this exciting new version of the internet. Jump in where and when you are ready."

Leon Rudge – Global Head of Product, Myzone

Anytime Fitness (<https://www.anytimefitness.com/>) - MetaAF will connect avatars with personal trainers, exercise, and health and nutrition coaches that combined will help the avatar manage the digital and mental health and wellness of their pixels.

VirZoom (<https://virzoom.com/>) – using VR headset, users can attached motion sensors to their bikes and experience riding anywhere in the world. Users can also exercise on a board using the Oculus Quest.

FitXR (<https://fitxr.com/>) – offers boxing and dance classes with the ability to workout with 6 other exercisers in a competition format wearing VR goggles.

Omni (<https://www.virtuix.com/>) - The Omni One is an elaborate full-body controller that lets you physically run, jump, and crouch in place. Not a traditional treadmill, it's a low-friction platform that's used with special low-friction shoes or shoe covers and a harness.

IronDogs (<https://irondogsntf.live/>) - play-to-earn powerlifting collection, hosts exclusive competitions with NFT prizes and connects powerlifters with strength coaches and personal trainers.

Gymbros NFT (<https://gymbrosntf.com/>) - joins gym membership with apparel — NFT holders are granted access into the full GYMBROS ecosystem, complete with seasonal merch drops and 50% off orders.

Step App - the FitFi platform pioneering a gamified metaverse for the fitness economy, launched a private beta partnership with 8-time Olympic gold medalist Usain Bolt, now serving as the face of the brand. Step App incorporates lifestyle, fitness, and play elements. The platform transforms everyday exercise activities like walking the dog or a daily jog around the park into social activities or competitions with friends and strangers that encourage consumers to earn as they exercise toward economic freedom.

Emirate of Dubai - the brainchild of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the United Arab Emirates and Ruler of Dubai. The Health and Fitness Metaverse launch is part of Dubai's more comprehensive vision to become the world's most sustainable city by 2030. It will offer a wide range of services and facilities, all of which will help people lead healthier and happier lives. You can find everything from exercise classes to diet advice and book appointments with fitness professionals.

Impact of Metaverse/VR on Exercise Participation and Adherence

As mentioned earlier, one of the major challenges in the health and fitness industry is creating long lasting behaviour change. Depending upon which sources you look at, less than 50% of the population meet recommended physical activity guidelines. This number does not seem to have changed much over the years whilst levels of sedentary behaviour are increasing. Although happening long before Covid, the acceleration and adoption of alternative forms of access to exercise (digital apps, home equipment) outside of the traditional gym has shown there is a demand for new types of access. These may have not had the long lasting impact some would have hoped for as access, time saving etc are only minor limiting factors. The major factors seem to include lack of knowledge, lack of motivation, and lack of enjoyment (the reader is referred to self determination theory for a more thorough review). It seems to me that many of the alternative options that popped up contributed pieces of the motivation puzzle but no one has put this together into what I would call a fully conceptualised wellness journey that leads to long lasting behaviours.

This is not to say that the MV will, but it could be a major part of the puzzle in enlarging the overall pie.

Although not specifically related to the fitness industry, Hwang (2022) found in a study of MV users that individual self-determination of the metaverse formed intrinsic motivation such as identification and enjoyment, which affected the intention to continue use, and the trust of metaverse members partially moderated the relationship between self-determination and motivation. The result contributes to the sustainability of the metaverse platform by suggesting an approach to users and the environment to improve the intention of continuous use of metaverse. This is fascinating because moving people from extrinsic to intrinsic motivation is one of the key challenges facing the health and fitness industry.

The study of the impact of the MV on learning and student outcomes is probably more advanced than it is currently in the physical activity realm. Research by Marini et al (International Journal of Interactive Mobile Technologies, 2022) shows that using the metaverse application positively impacts students' learning outcomes. Students can use the Metaverse app to see better learning outcomes. Students are also more interested in learning and can easily understand and discover new knowledge. In addition, students find it more fun to learn using the Metaverse app, which is a mobile augmented reality. This research is representative of many similar types of research and it is not a stretch to think that if knowledge and autonomy are two major limiting factors affecting an individual's level of physical activity, then the MV could help bridge this gap based on its inherent strengths in aiding learning (often through enjoyment).

Kinesiologists at the University of Minnesota reviewed 15 studies that looked at the impact of VR on physical activity. Among those that looked at physical outcomes such as body composition, fitness level, and muscular strength, two-thirds showed positive results from VR workouts.

Perhaps the more interesting finding comes from the studies that looked at VR's psychological effects. According to the research, virtual workouts can reduce fatigue and symptoms of depression. This is interesting as some evidence does show that overuse of digital technologies can lead to mental health issues. There then seems to be a role for the MV in combating its own negative impact.

In a study published in 2019 by University of Georgia researchers, they explored the topic whether the use of virtual reality during high-intensity cycling could reduce pain from exercise. The study tested 94 healthy adults, specifically selecting those who didn't have a high likelihood of motion sickness – one of the potential drawbacks of using a VR headset. The study found that, among those who were exposed to the interactive VR experience, the perceived pain intensity in their quadriceps was 12–13 per cent lower during the second and third sprints compared to participants in the non-interactive group. Meanwhile, cycling performance was the same across the board; pain relief was not a side-effect of reduced cycling performance among those engaged by the interactive VR experience. This should not be surprising to many as immersive GX experiences have been around

'Looking beyond its inevitable challenges, the metaverse's ability to compound the effects of gamification and community are where I believe it will give the most commercial advantage, especially to health clubs. Blending physical in-club workouts with virtual online workouts and then gamifying your outputs and outcomes into one online community has real commercial potential. Furthermore, the potential of gamifying this with family-based, team-based or friend-based memberships, so that multiple generations, from multiple households, across multiple geographies can interact online, would only provide a much larger pool of customers from our industry to engage, interact and sell into.'

Ross Campbell – Founder and CEO, Fit Summit

'The possibilities appear quite endless and we are at the really early stages so there is a lot to get our collective heads around in the industry.

Clearly there is a demographic consideration as some of our customers are not quite digital natives let alone metaverse natives, though this presents new opportunities.

There are simple opportunities across each of the metaverse components from the simple transactional - accepting crypto as payment, on to the virtual meeting world to open up new possibilities to trainer or member education, or en-masse member on-boarding for example, through to the more creative NFT asset sales with elements of brand IP, and the ultimate play in metaverse real estate where members through their paid-for avatars can compete, 'earn' and socialise in branded virtual gyms. Ultimately with the latter, such a domain needs to present exciting reasons to visit and keep visiting (land isn't cheap to own!) though once there, there are endless opportunities to monetise activity in the space.'

Simon Flint – CEO, Evolution Wellness Holdings

for a while and even anecdotally it can be observed that levels of perceived exertion are lower than in traditional types of activities.

In a review by Yang and colleagues (Korean Journal of Sport Biomechanics, 2022) it was analyzed that exercise rehabilitation using virtual reality and metaverse games for the rehabilitation of disabled and elderly patients can help improve brain, physical ability, and anti-aging by activating the body and mind. Thomason, in an interesting perspective published in Global Health Journal (2022), explored the potential of token economics and the MV could be used in treating those with chronic diseases.

Whilst clearly not an exhaustive review of the literature, the research cited does hold some exciting implications compared to existing health and fitness experiences. The health and fitness MV seems to hold the ability to span a wide range of audiences and needs despite it often being touted as a young person's arena. With enhanced capabilities in experiences, learning, connections, community, autonomy and fun – the unfulfilled promise could yet to be fulfilled. A final compelling example is that of iGYM which is an AR system for inclusive play that was created to give young people with mobility disabilities access to physical play activities with their non disabled peers.

Implications for Health, Fitness, and Wellness – build your entry: not only exertainment!

The convergence of fitness and gaming is not really new but the MV takes this to another level. Brands of all kinds are trying to stay relevant to Gen Z etc and the fitness industry is no different. However, it seems that the MV could have much broader applications in terms of target audience and value proposition than just exertainment. This is important for all stakeholders in the industry, from government bodies, to health care providers, to insurance firms, to health clubs as well as equipment manufacturers. Eco system thinking is absolutely the way to think strategically for this industry in both enlarging the pie and getting people to adopt long lasting lifestyle changes. How (and when) you firm and the MV fits into the eco system is the question that should be asked.

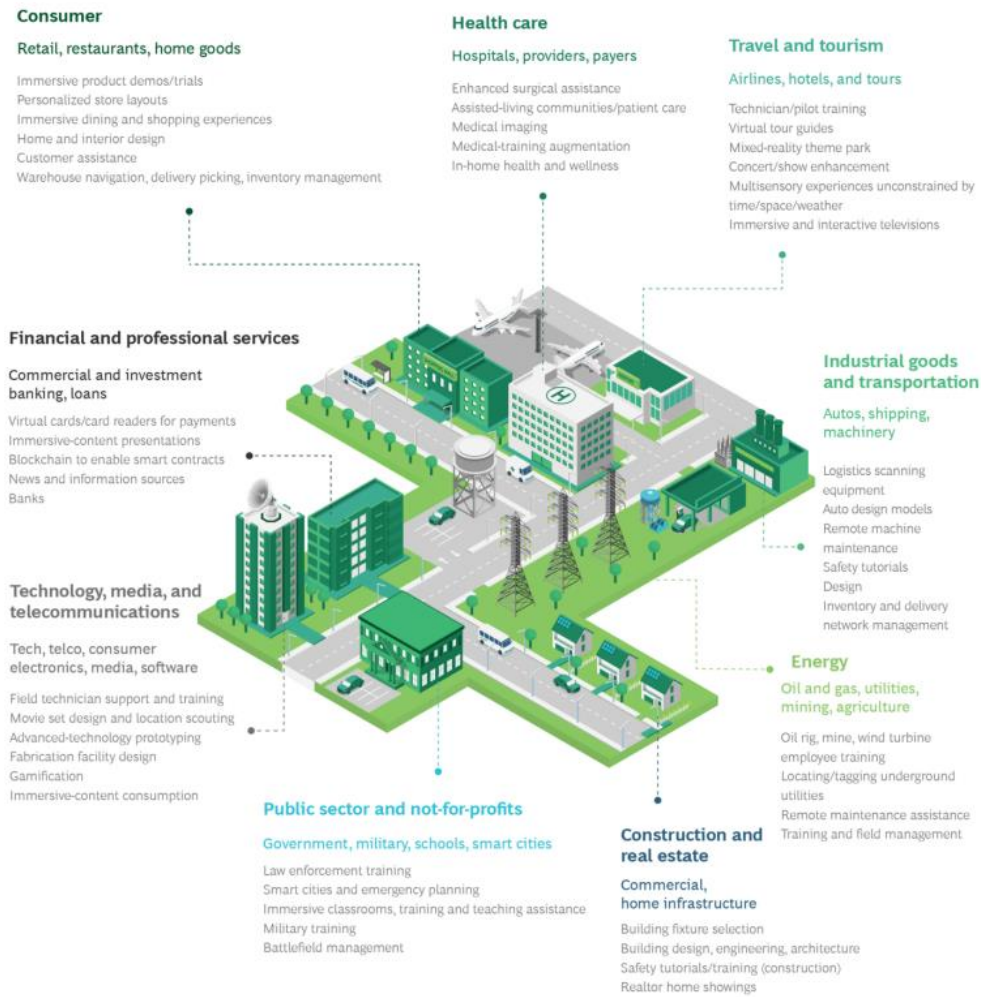
At a simplified level, the opportunities to offer MV based wellness experiences seem obvious:

- VR based workouts
- Health and wellness events
- Community workouts using avatars
- Workout with friends using VR, AR
- Celebrity led workouts
- Compete against athletes
- Fully immersive gym or facility experiences with music, trainers etc
- M2E plays with both digital and real rewards
- Gaming tie ups
- Play before you pay (trial)
- Pay as you go and access based fees
- Product marketing
- Customer engagement
- Brand loyalty through community
- Customer education

According to the Welltodo 2022 Consumer Wellness Trends Report, Gen-Z today are more inclined towards gaining a more robust workout experience rather than a usual fitness regime that offers core fitness mantras. Since the older ages of Gen Z are now in their mid-late 20s and will garner significant purchasing power, it is a segment worth targeting as part of the tailwinds driving MV use. However, as discussed earlier, the potential of the MV to impact the wellness eco system is much greater than just varieties of exercise gamification and rewards.

According to Dwivedi and colleagues (International Journal of Information Management, 2022), the potential for organisations to adapt their business models and operational capacity to function on the metaverse is significant, with transformational impacts on marketing, tourism, leisure and hospitality citizen-government interaction, health, education and social networks. For individuals that choose to interact with the metaverse in the future, the seamless nature of the transition between physical and virtual and the multimodal enhancement of experiences and interactions, opens an endless scope of possibilities, many of which perhaps beyond our current comprehension.

In two papers I published recently, [What is Apples Makes a Treadmill; or doesn't!](#) and [Business Model Innovation for a Fitness Equipment Manufacturer](#), I have argued that significant changes are looming for the industry that only business model innovation (BMI) can address. That is, exploiting current competences will not be enough in the next 5 years, one must explore and develop new competences.



Real World Use Cases of the Metaverse (Source: BCG, How the Metaverse will remake your strategy, 2022)

According to BCG, a third phase of the MV is underway, a broader ecosystem is developing thanks to continually expanding and faster connections. It is seeing monetization through crypto ecosystems, including the birth and rapid growth of cryptocurrencies (both governance tokens and utility tokens) and economic systems and virtual assets (such as decentralized finance and nonfungible tokens). BCG go on to say that much of this action has been in the B2C arena but the B2B space could be where the majority of value is created. For example, at an operational level they estimate a large retailer could realize a 1.5-2% points improvement in margins from staff on boarding and training,

200-400m upside due to improved ins store experiences, and \$500-700m improvement based on better inventory management.

The BCG use cases above are some solid examples of BMI related to a variety of industries. If one looks at this at the individual firm level, there are also clear examples of BMI that would enhance the value proposition received by both consumers and enterprise customers in the wellness industry:

- Product testing and experiences
- Design thinking at scale with CX tested in real time
- Product launches
- Massively expanded reach of marketing touch points such as tradeshow
- Social support groups – i.e. health care, weight loss
- Remote and immersive health evaluations and interventions at scale and in depth
- Immersive virtual facility tours
- Digital twins of facilities
- Virtual real estate and e comm
- Product design and digital twins
- Facility design and fit out in real time and space using AR and VR
- Agile and lean at scale and in real time leveraging XR collaborative R&D
- True omni channel experiences and the potential for seamless transition between the real and virtual worlds
- Movement of assets across all platforms once interoperability is solved
- Content creators – could deploy their content across platforms and benefit from ownership
- Training and development
- Enhanced collaboration
- Payments
- Smart contracts
- Mass customization
- Supply chain transparency and real time tracking
- Customer service
- Employer branding and internal marketing

'The current examples we see today from the VR fitness industry ranges from enabling users to sit on a beach in Hawaii and meditate from their lounge to helping burn off calories by fighting zombies in a HiiT style mission. However, over the next 5 years we will see more and more fitness apps brought into the metaverse that use dynamic conversation and social interaction to guide users to their fitness goals within their home through a virtual PT, games, and live group fitness.

As the technology for headsets quickly improve from a giant ugly eye mask to a stylish pair of reading glasses, the combination of VR and AR will become publicly unrecognizable whilst in use. This could lead trainers to be present with their clients in the gym, whilst not physically being in the room, yet appearing as augmented reality. No doubt using this technology any average gym goer will be able to be trained by such celebrities.... like the rock. Who doesn't want the Rock yelling at them to lift more! Using dynamic conversations and A.I the technology will be able to instruct, correct movements and potentially motivate clients in real time skinned as whatever figure appeals to the user.

On top of this is the industrial utility of VR to assist in the education of staff, VR conferences and AI driven recommendations on efficiency improvement could far outweigh the consumer facing usage for the industry. One thing is for sure, with Oculus out selling PlayStation and Xbox recently the future of gaming is VR which means the tool will become a normal item in house to be used for other verticals, such as fitness.'

**Andy Peat – Chief Product Officer,
Lift Brands Inc**

Industry	Adoption level						
	High (>70%)	Medium (40–70%)	Low (<40%)				
	Marketing campaign or initiatives	Learning and development for employees	Meetings in the metaverse	Events or conferences	Product design or digital twinning	Recruiting or onboarding new employees	Customers can pay with crypto currency
Technology	68	64	54	64	54	39	23
Media and telecommunications	82	36	36	43	54	18	25
Advanced industries	64	55	36	64	64	36	9
Financial sector and insurance	67	63	56	49	56	25	31
Consumer, AF&L, and retail	95	56	59	41	50	41	14
Energy and materials	54	85	69	46	69	31	8
Healthcare and public sector	10	59	79	72	59	38	34
Tourism, transport, and logistics	56	78	56	78	56	44	22
Total sample	67	63	53	52	52	31	22

Metaverse initiatives implemented by industry (Source: McKinsey Q, 2022)

From an eco system perspective, the examples are perhaps less obvious but nevertheless still compelling. The organizations that are part of this eco system are many but are mainly; insurers, health care providers, doctors, equipment manufacturers (home and commercial), big tech, digital apps, wearables, drug companies, content producers, trainers, health clubs, corporate wellness, government bodies, industry associations, commercial health and wellness providers, behavioural change companies etc.

- Fractionalized payment for IP – wellness journeys created by multiple stakeholders could in theory be managed by NFTs
- User journeys based on behavioural science – tying together many existing eco system partners such as insurance, health clubs, gamification and rewards, the potential of the MV to bring this to life is beyond current omni channel options that leverage apps, Web 2 and IRL
- Aggregated health data – one of the biggest challenges facing the wellness industry is the scattered nature of health records as well as the fact that individuals do not own nor have full access to their own records. Solving this problem is a major goal for big tech firms such as Apple and Amazon as they target the \$10T health industry. The MV could become this single source of truth that could provide true personalisation across all of wellness for users and indeed reward them for their activity with eco system partners. This would have a huge impact on growing the pie and enhancing adherence. Rather than having individual corporations profit from this behavioural surplus (such as Google and Facebook), the balance of power would switch to the individual who could even monetise their data
- Interoperability and data sharing – despite all the APIs available, data from different wearables and platforms, data cannot truly be codified and used across multiple platforms. The MV could become the solution to this problem once interoperability is solved

Your MV Strategy

According to McKinsey (2022), these are the key marketing considerations as one thinks about the MV:

- Define your metaverse marketing goals - Why do you want to be part of the metaverse? If your brand's consumers are there, do you want to increase awareness among new

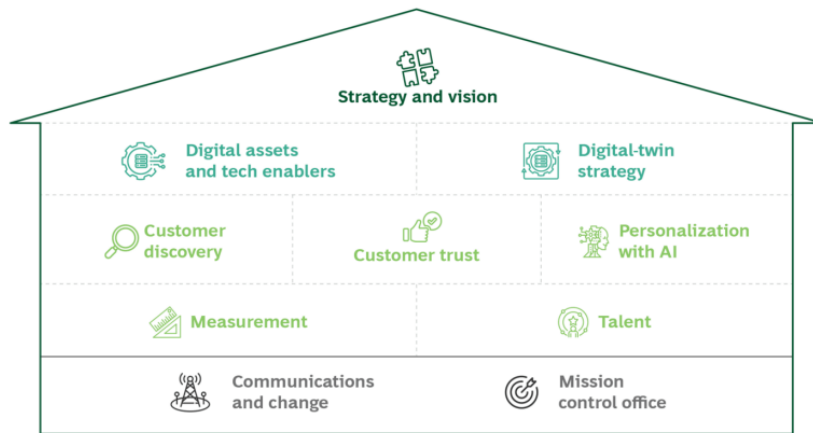
audiences, position your brand and generate favorable sentiment, or promote loyalty? Is your goal to spark innovation in your marketing team? For the near term, the primary goal of brands shouldn't be driving sales directly, since sales of virtual items are still far smaller than sales of physical ones.

- Identify the platforms that provide the best opportunity and brand fit - Right now, Roblox, Fortnite, Decentraland, Minecraft, and Meta's Horizon Worlds are just a few of the metaverse games and platforms out there. Some will be better than others for specific purposes. There is ample opportunity to experiment with multiple platforms to see what works.
- Experiment with money-making models - Direct sales may not be front and center on the metaverse right now, but that doesn't mean brands shouldn't be thinking ahead and planning to capture the future potential. Direct-to-avatar sales of virtual goods are already a \$54 billion market, and some forward-thinking brands are testing different opportunities to generate revenues.
- Create, leverage, and partner for new metaverse capabilities - For the metaverse, as for any new venture, brands should assess the skills they will need, identify which they already have and which they must acquire, and appoint someone to lead the development and execution of a coherent strategy to capture value. Brands should also aim to work with and learn from others, including the independent developer and creator communities that are active on the platforms already.
- Rethink how you measure marketing success - Measuring the returns on marketing spend is always critical, but the appropriate metrics for the metaverse may not be what you expect. Digital marketing typically focuses on metrics such as the number of visitors, conversions, "likes," and shares, as well as the cost of acquiring customers. With the metaverse, marketers may need to define new engagement metrics accounting for the unique behavioural economics at play (such as the "scarcity" of NFTs, which are supposed to be unique).

JP Morgan (Opportunities in the Metaverse, 2022) suggest a broader range of considerations related to business model and customer value:

- How would your business model and/ or overall organization be impacted if there was more time spent interacting, transacting and socializing in virtual worlds? Would there be any impact at all?
- If your business and brand were in the metaverse, what value could you create for the community?
- Would you be a participant or a service provider?
- What are the authentic experiences and services of my organization that make sense in a virtual ecosystem?
- If you are a consumer-facing brand, is there an opportunity to create new marketing channels through experiences, digital goods, sponsorships and a branded real estate presence?
- Do you have the in-house talent to help you navigate the metaverse?
- If you want to have a presence or create an experience in the metaverse, do you have the in-house skillsets to do it yourself?

- Business in the real world remains the priority. If your business is limited in time and economic resources, what is the magnitude of value accrued from being perceived as a first mover in an emerging sector?
- How important is it to your business to target a younger generation audience and tech-forward sub-communities?
- Do your competitors have a presence in the metaverse?



Key components of a Metaverse strategy and capability (Source: BCG, *How the Metaverse will remake your strategy*, 2022)

In the final analysis, your MV strategy will need to become part of your organizational strategy. Do not think of strategy as something which is linear and purely analytical. Take a learning and experimental view, realizing that your approach to the MV and how it impacts your business model will be one of iteration and emergence. Since this will require the exploration of new ways of thinking, doing business, and evaluation, consider having this begin as a separate unit in the organisation not subject to the traditional hurdles often met by new initiatives. Critically, make sure this unit reports directly to the CEO and has the support needed from various functional heads. This is the definition of an ambidextrous organization and the MV fits squarely, for now, into this box.