

Richard van Hooijdonk is a popular and well-known futurist, trendwatcher and keynote speaker. His famous inspiration sessions take you into the future and introduce you to developments that will completely transform our world.

Examples are the high-profile 'Trends 2030' keynote and sector-specific keynotes on, among others, the future of education, healthcare, construction, finance, logistics, agriculture, and government.

Van Hooijdonk makes complex subjects understandable and the unimaginable plausible – with a focus on technology and innovation and peppered with a dose of humour. More than 550,000 people around the world have already attended his inspiration sessions. Van Hooijdonk has more than 1,500 articles and 60 e-books to his name, and his book 'The world of tomorrow' became a bestseller. The popular trendwatcher is also a regular guest speaker on radio and TV.

Want to book an inspiration session? Go to www.richardvanhooijdonk.com



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INTRODUCTION

The metaverse will bridge the gap between the two realms we already jump in and out of multiple times a day: the real world and the virtual one. In fact, it will increasingly blur the lines between the two.

The leaders of the internet are making serious plans for the metaverse: a future in which our physical world will merge with the digital – in fully immersive virtual reality. To make this more concrete, trillions of dollars are invested into the metaverse by private industry. In 2003, futurist Ray Kurzweil already predicted the current developments: "By the 2030s, virtual reality will be totally realistic and compelling and we will spend most of our time in virtual environments... We will all become virtual humans."

According to futurist and keynote speaker Richard van Hooijdonk, "the metaverse will enable everyone – from any place, and at any time – to socialise, do business, and do many other things we do in the real world. It will also increasingly enable things, events, creatures, sensations, capabilities, and 'worlds' that we were previously only able to dream about and completely free us from any physical limitations. Users will be able to jump in and out of this parallel world, which will encompass an infinite number of virtual spaces inside other virtual spaces, include any

kind of environment you can possibly imagine, cater to anyone's need, and even offer real-world (economic) benefits."

The metaverse will enable you to go to work in the costume you got on the web, and join a group pilates session in the same costume afterwards. It will enable you to donate your clothes to a real-world friend on Instagram, or trade them for virtual items or tokens. In the future, we will carry our data, possessions, and ourselves from real-life place to place, and from virtual platform to virtual platform, and we'll either be using our own two eyes or donning a VR headset. The metaverse will bridge the gap between the two realms we already jump in and out of multiple times a day. In fact, it will increasingly blur the lines between the two. Tim Sweeney, CEO of Epic Games, says: "The metaverse is going to be far more pervasive and powerful than anything else. If one central company gains control of this, they will become more powerful than any government and be a god on Earth."





1. WHAT EXACTLY IS THE METAVERSE?

In 1992, science fiction author Neal Stephenson coined the term 'metaverse' in his novel, Snow Crash, the story of a pizza courier who spends his free time escaping into the Metaverse: a simulated world in which its denizens live as whoever they designed their avatars to be. The metaverse is basically a next-level immersive social network and Internet of Things platform – a virtual copy of the real world in which everything is interconnected instead of siloed and in which the virtual has the same level of permanence as the real world. Think VR and AR,



avatars, holograms, 'teleportation', and more – on steroids. Most metaverse platforms run on blockchain – a decentralised database shared across a network of computers. But while the metaverse parallels the real world, it is also an extension of it.

One of the distinguishing features of the metaverse is its social aspect. In ten years' time, human-computer interaction and social media will have undergone a major transformation.

We will have moved away from 2D applications – such as the static social media platforms we use today to post information – and transitioned to an era of mixed reality in which the real and virtual worlds are increasingly intertwined.

The metaverse basically symbolises the next generation of our hyperconnected reality.

In Mark Zuckerberg's words: "It's an embodied Internet that you're inside rather than just looking at. We believe that this is going to be the successor of the mobile internet." The idea behind the metaverse is to be able to interact within shared, multidimensional digital spaces, in which people immerse themselves in digital worlds and content and partake in virtual activities — like attending virtual events in virtual places — instead of merely being a spectator viewing or listening to content.

In an interview with The Verge, Zuckerberg said: "Facebook will effectively transition from people seeing us as primarily being a social media company to being a metaverse company." And in his essay, venture capitalist Matthew Ball identifies various metaverse key characteristics, such as: it needs to contain a fully fledged economy, span the physical as well as the virtual worlds, and offer unprecedented interoperability. The metaverse will not be run by one company. According to Zuckerberg: "It will be an embodied internet, operated by many different players in a decentralised way."



2.1 REAL-LIFE AND SCI-FI EXAMPLES OF WHAT A METAVERSE IS LIKE

Second Life

The most famous of metaverses is probably Second Life, launched by San Francisco-based developer Linden Lab in 2003. It's a virtual universe where people can game, chat, socialise, shop, earn a living, buy virtual properties, and basically create anything they want. Second Life is the largest and most successful 3D virtual world created entirely by its users. It's unlike anything anybody has experienced before. Unlike massively multiplayer online role-playing games, Second Life isn't a game. It's an intriguing parallel world where The Maldives have opened a virtual embassy, U2 played a virtual concert, and IBM purchased ten virtual islands for its employees to hang out.

Some Second Life users are making a living creating and selling virtual items and one Second Life user, Anshe Chung, even became a real-life millionaire selling virtual properties. Second Life is still going strong today, and partly thanks to a cross-platform payment system, which enables users to convert their virtual currency into US dollars, the platform will also play a significant role in the modern metaverse.

Second Life has a flourishing economy, with thousands of creators developing new content and experiences and where anything from motorcycles to puppies and high fashion clothes are sold. In an interview with GamesBeat, Brad Oberwager, executive chairman of Linden Lab, said:



Linden Lab

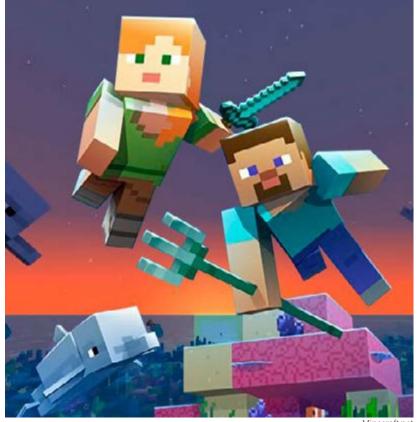
"If you look at Second Life, what it did 18 years ago and what it's doing now, the world has kind of come back to Second Life. Everybody is trying to be Second Life. And it's a pretty interesting time. When you think of creators in the creator economy, Second Life is still the leader and people are getting direct payments from each other. We're a true economy." Oberwager continues: "Because of all the conversations about the metaverse, our name is coming up again as the pioneer. And so our conversion rates are going up. We are a \$600 million a year economy. We are supporting creators in ways that allow them to make money. Our goal is to be the least-expensive place to be a creator."

2.2 REAL-LIFE AND SCI-FI EXAMPLES OF WHAT A METAVERSE IS LIKE

Minecraft

In the mid 2000s, Mojang created Minecraft as a humble browser extension to offer players a way to build whatever they were able to imagine within a digital space, using 3D blocks. The game also had a survival option and tasked players with gathering resources, feeding themselves, and trying to escape the various deadly creatures in the game. Minecraft has since grown exponentially, been acquired by Microsoft, and now boasts thousands of enormous, highly populated servers. Minecraft could be considered a prototype metaverse, a breakthrough virtual world created by its users. Its players are accustomed to listening, reading, playing, sharing, communicating, competing in games, socialising, and creating via Minecraft, bringing elements of participation in the virtual world into everyday life.

Minecraft offers lots of building projects and mini-games players can join, as well as colonies of people that each have their own roles within their tribe, building toward a monumental goal: to create a world of their own vision, to create hierarchies, build settlements, socialise with others, and survive within the rules of the game. Because all these elements mirror the important aspects of our real-life societies, and players' lives are experienced in much the same way as in the real world, and because it is virtually open-ended and highly customisable, the Minecraft universe – and the worlds that it allows people to build – can be seen as a metaverse in its own right.



Minecraft.net

2.3 REAL-LIFE AND SCI-FI EXAMPLES OF WHAT A METAVERSE IS LIKE

Fortnite

For many people drifting in and out of lockdowns over the past 18 months with nowhere else to go, the continuously growing and evolving Fortnite has been a platform to meet and stay connected with friends and family, a great escape to chat, hang out, and have a good time. Epic Games CEO Tim Sweeney describes the game Fortnite as "a phenomenon that transcends gaming."

Fortnite is an online playground, a virtual 3D space where gaming and non-gaming elements are mixed. It's much more than a video game: it's a shared social experience in a virtual world. Fortnite was first released in 2017 and has since grown into a worldwide sensation with more than 350 million registered players. It's best described as a survival game in which players are dropped on an island and, as a storm closes in, they are forced close together while fighting to remain the last player standing.

As a result of the ever-growing numbers of partnerships, Fortnite regularly hosts huge in-game events that are attended by thousands of avatars, such as the incredible interactive Ariana Grande concert, performances by the likes of Marshmello and Travis Scott, and crossover events with the Marvel Universe or a special Star Wars event debuting the trailer for The Rise of Skywalker. This showcases what can be achieved by creating social, digital

universes within video game worlds and is a mere sign of all that's still to come. Fortnite isn't just a game — it's a social meeting place for many groups of friends, and millions of people are already hanging out in this virtual universe. In fact, according to those in the know, Epic Games already created the best version of the metaverse we have today, and in April this year the company raised \$1 billion in funding from various investors, among which Sony. "We are grateful to our new and existing investors who support our vision for Epic and the metaverse", said Sweeney.



2.4 REAL-LIFE AND SCI-FI EXAMPLES OF WHAT A METAVERSE IS LIKE

The Matrix



The first Matrix movie, which was released in 1999, is about a dystopian future in which people are trapped in an AI-created virtual world, unaware of the existence of the real world. Controlled by machines, these people are kept in pods to generate bioenergy. A cable runs from their brains and connects to a device that projects images of a simulated life into their minds, tricking them into believing they are living a normal life. The protagonists Morpheus and Neo – who do live in the real world – try to liberate these captive people from their simulated realities.

When Facebook rebranded itself to 'Meta' in order to focus on its efforts to build the 'metaverse,' the makers of The Matrix Resurrections took to Twitter and posted a picture showing a red and a blue pill, adding the comment "Now based on real events. The choice is yours," explaining that the metaverse as shown in The Matrix is becoming reality.

2.5 REAL-LIFE AND SCI-FI EXAMPLES OF WHAT A METAVERSE IS LIKE

Ready, Player One

Another great example of a metaverse is the movie Ready, Player One. Based on the 2011 Ernest Cline novel and set in 2045, it presents the metaverse as a 3D photoreal digital meeting place where people engage with each other and where any (in)conceivable experience is possible. With the real world paling in comparison, even falling into ruin, users remain wired to the virtual Oasis platform – an infinite space of intertwined virtual realms. The main storyline is about Wade Watts, an unlikely hero on a quest to find the fortune left behind by James Halliday, the deceased Oasis creator.

The Oasis is run by the corporation Innovative Online Industries (IOI), which is owned by Ready Player One antagonist Nolan Sorrento. IOI sells tools that enable players to immerse themselves in the Oasis. And it might come as no surprise that the very best features are so expensive that only very few players can afford them. Sorrento's plans are to populate the Oasis with ads that players will be unable to get away from – which sounds strangely familiar. Thankfully, the movie ends on a high note, with the players closing the evil corporation down and making sure everyone benefits in the end.



Warner Bros

3. WHY THE METAVERSE MATTERS FOR BUSINESS



START

The metaverse will fundamentally transform how we experience and interact with the space around us and will also have a significant impact on the way we do business. It will enable a simulated reality encompassing fully immersive experiences in VR and AR and present various, previously not available – or not considered viable – business opportunities. A few decades ago, every business realised the necessity of internet and social media presence and involvement, but now we're inching closer to a point where, in order to stay relevant and survive, every business will at the very least (need to) have real-time live 3D presence and find ways to benefit from everything the metaverse will have to offer. And many signs of lucrative opportunities are already unfolding.

NFTs – unique digital tokens

NFTs or non-fungible tokens – unique digital tokens – will be the key to unlocking many parts of the metaverse. They are a special type of blockchain-based token that can be used to demonstrate proof of ownership over digital items, such as music, art, or in-game property like virtual items owned by users registered on the blockchain.

According to marketing consultant, business author and inspirational speaker, PR Smith, the definition of an NFT is "a certificate of authenticity, or a deed or proof confirming you own the right to display the above art on your wall or in your digital wallet. It is technically an ERC-721 token on the Ethereum blockchain that might give you the right of ownership of the copy you bought for your private use, but not necessarily over the ownership of the original artwork.

Production rights and copyright are automatically retained by the artist unless otherwise specified in the contract. Regardless, non-fungible means 'irreplaceable' since each token is unique. And 'unique' creates scarcity which, in turn, increases the market value for NFTs."

NFTs can be traded or collected as digital assets with an intrinsic value. NFTs may serve as the deed to virtual property as well as its key –

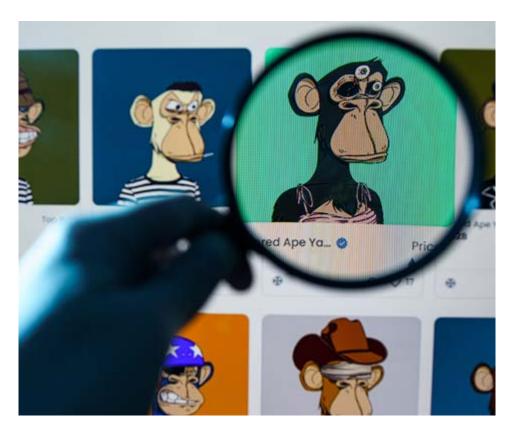


granting the owner exclusive access to enter that location as well as the ability to grant others access. NFT-controlled access could also include VIP access to real-life events, like festivals or conventions, and NFTs could even be used to enable special access to fan-only content, opening up new fan engagement avenues. As Shreyansh Singh writes for media platform Decrypt: "Given how the tech world is preparing for a metaversebased future, NFT-based augmented experiences are likely to become a cornerstone of social media experience. Meanwhile, the potential for blockchain-based ID systems will accelerate the adoption of financial services in the metaverse." The metaverse has fuelled the growth of NFTs on an increasingly wider scale. During the first part of 2021 the NFT market witnessed sales to the value of \$2.5 billion, a significant jump compared to 2020's \$13.7 million.

Metaverse art creators

Before the onset of the pandemic, finding galleries to showcase his artwork was the emerging New York artist Beeple's life. His art was on display at events like the annual high-level Miami Beach Art Basel and others. But when the pandemic struck, all the art galleries closed and all his exhibitions were cancelled. He then started experimenting with the world of VR and digital art, and started selling his unique digital art pieces online. Beeple, also known as Mike Winkelmann, eventually exceeded over \$100 million in sales, with his latest artwork selling for an incredible \$69 million. Other artists have followed suit, with pieces selling for hundreds of thousands of dollars.

What customers get for this money, however, is an image which is represented by an NFT. As media and tech company The Doe writes: "What makes NFTs special is they provide a solution to what gives assets value. Digital files, whether they be art or digital trading cards, can be easily reproduced and duplicated. NFT artwork can be 'tokenised', meaning the piece of digital art is put onto the blockchain, where it is verified, sourced and authenticated. The history of the owners is recorded, and you can ensure that the lineage of your artwork begins with the artist."



3.3 WHY THE METAVERSE MATTERS FOR BUSINESS

Retail

The creation of shopping venues, like malls, stores, and more, will increasingly involve the metaverse. Traditional retail stores are already feeling the pressure to find ways to stay competitive in an increasingly e-commerce dominated market. And with the metaverse on its way, retailers should consider providing even more channels of client engagement and offering more memorable immersive experiences. Retailers can provide access to digital twin tech for checking out a new store remotely, virtually trying on clothes, visualising furniture items in their home, and more.

The metaverse will enable us to revolutionise even the best digital shopping experiences we have today. Imagine getting beauty tips from a personal beauty consultant you can teleport

– as a hologram – from the metaverse into
your real-world living room. Or getting firsthand knowledge of a product's quality and
performance, ordering it, and having it delivered
to your doorstep. The metaverse will even enable
you to check out a new car and take it on a test
drive on a virtual race track of your choice.

As we spend more time in the metaverse, we will most likely get new 'status symbols' as well. Such as the virtual jewellery and clothes we wear, the virtual car we drive, or the virtual dream home we own. And in the future, brands will increasingly focus on creating an ever-expanding range of virtual products that will be marketed to their clients at real-world prices.



Real estate

With the use of digital twin technology, companies can create digital replicas of their physical location, which can operate as an additional, separate entity. In real estate, primarily as a result of the lockdown measures, digital twins of properties were created for potential buyers to virtually view properties. And as employees are slowly but surely returning to their places of work, more and more commercial real estate companies are using digital twin tech to help them plan return-to-work initiatives.

The metaverse will not only offer real-life real estate businesses exciting new opportunities, it will also enable the creation of completely new types of real estate, such as virtual real estate. Metaverse property, for instance, is the world's first virtual real estate company. It offers the buying and selling of virtual real estate, full property management of existing businesses, and finding rental properties within the metaverses. These virtual properties could be vacant spaces for creators to build on, or structures that reflect real-life or newly created properties. They are represented by coordinates on the metaverse platform where users can meet up using their avatars. The company also offers services like the development of virtual land, expert level consulting for all major metaverses, and marketing and advertising of businesses in the metaverse.



The future of metaverse enterprise

Many experts believe that the metaverse is the future of digital business. And staying competitive means that businesses should plan for what customer engagement in the metaverse will look like and how they envision finding new marketing opportunities. With the metaverse being a combination of the physical and the virtual worlds, consumer behaviour and shopping preferences will most likely be very different in either 'realm'. Vastly different consumer behavioural patterns, purchase preferences, and changing market conditions will also significantly transform traditional business models. Within the metaverse, AI and data science metrics will increasingly exert influence on productivity and profitability, while virtual assistants will determine how customer relationships take shape and are maintained.

Vlad Panchenko, founder and CEO of DMarket, a marketplace for building virtual worlds, says: "The metaverse will grow into the omniverse with multiple cross-chain possibilities. The virtual economy will become as important as the physical economy. Many brands intuitively or on purpose are moving towards the metaverse which is creating a global economy on track to exceed the current one many times over. There will be no other option but to join it. Otherwise, you will not survive as a company." Panchenko continues: "It's crucial to develop a strategy on how to transfer your activities into the virtual world and prepare your business for virtual reality already, today. And in three years we will witness millions of jobs and thousands of businesses in the metaverse. Those who are preparing today will be a part of the multi-trillion economy tomorrow."





4.1 COMPANIES ALREADY SERIOUSLY INVESTED IN THE METAVERSE

Meta

While "no one company will run the metaverse," Facebook sure is at the forefront of metaverse developments. In fact, the social media giant has big plans for its digital world vision, one of which is creating 10,000 high-skilled jobs across Europe. Facebook Horizon launched in beta last year, a new platform that is accessible via the company's Oculus Quest headsets. Horizon is an expansive interconnected world where people can explore new places, build communities, play games, and even create their own new experiences.

Horizon consists of various spaces, starting with a bustling 'town square' for people to meet and hang out as avatars. From the town square, you can be transported to new worlds in telepods. There's Horizon home, and as the name suggests this is a 'home space' in the metaverse. There



are also dedicated game spaces where you can play digital games and import them into the real world as holograms. Horizon marketplace enables users to sell and share 3D digital items to enable a lot more commerce and help grow the metaverse economy. And of course there are Horizon workrooms, where people can come together in virtual rooms to work together and interact as avatars in a virtual-physical space –

think meetings, brainstorms, presentations, and perhaps even chit-chatting by the virtual water cooler. Features in these workrooms will include remote desk streaming, hand tracking, video conferencing integration, and more.

In the words of Zuckerberg: "You can think about the metaverse as an embodied internet, where instead of just viewing content – you are in it. And you feel present with other people as if you were in other places, having different experiences that you couldn't necessarily do on a 2D app or web page, like dancing, for example. I think we will effectively transition from people seeing us as primarily being a social media company to being a metaverse company."

4.2 COMPANIES ALREADY SERIOUSLY INVESTED IN THE METAVERSE

Roblox

Video game platform Roblox Corporation offers users, as well as developers, ways to create digital worlds with a view of creating its own virtual economy, including shopping experiences and business opportunities powered by the platform's Robux currency. Roblox envisions the metaverse as a platform for immersive coexperiences, a place where "people can come together within millions of 3D experiences to learn, work, play, create and socialise." Compared to other contenders scrambling to claim a piece of the emerging metaverse pie, Roblox "has, by far, the most robust and multi-faceted economy," according to venture capitalist Matthew Ball.



4.3 COMPANIES ALREADY SERIOUSLY INVESTED IN THE METAVERSE

Autodesk

As a leading creator in 3D animation and construction, cloud software firm Autodesk has the capabilities to play a crucial role in the creation of the metaverse. The company builds software programmes that are used by engineers and architects to design and create products and buildings in the real world, but also animations for entertainment and gaming in the virtual world. Being able to provide the tools required to create the products, avatars, structures, buildings, and practically all other things in the metaverse, Autodesk's tools will undoubtedly be invaluable for creators and companies looking to develop the metaverse.



Autodesk.co.uk

4.4 COMPANIES ALREADY SERIOUSLY INVESTED IN THE METAVERSE

Nvidia

Computer chip maker Nvidia Corp, which built its Omniverse platform for connecting 3D worlds into a shared virtual space, could become another one of the metaverse's building blocks. The Omniverse, a real-time collaboration platform, is used for creating 3D simulations of real-world factories and other buildings and structures, the 'plumbing for the metaverse', so to speak. Nvidia's Ominverse could offer a valuable contribution, as there will likely be a myriad of metaverses that will need to be connected to enable users to seamlessly travel across different virtual spaces.

Omniverse is already used by companies like Autodesk and Adobe. "Nvidia Omniverse connects worlds by enabling the vision of the metaverse to become a reality. With input from developers, partners and customers, we're advancing this revolutionary platform so that everyone from individuals to large enterprises can work with others to build amazing virtual worlds that look, feel and behave just as the physical world does," said Richard Kerris, vice president of the Nvidia Omniverse development platform.



nvidia com

4.5 COMPANIES ALREADY SERIOUSLY INVESTED IN THE METAVERSE

Tencent

Chinese internet and technology giant Tencent Holdings Ltd, the seventh largest corporation in the world according to PwC, has stakes in game studios like Activision Blizzard and Epic Games. A whopping 50 per cent of the company's revenue is generated by video game sales. The tech behemoth has registered a multitude of metaverse-related trademarks for its social and music apps in China, and has gone on a hiring spree for developers to create immersive futuristic games. The awe-inspiring business empire of Tencent covers everything from mobile payments to virtual offices and gaming. More than one billion people already use the WeChat app for chatting, shopping, watching videos, ordering food and taxis, and more.

In a Tencent metaverse, you could find yourself in a scenario like this: you design your avatar on the QQ chat app and use it during live stream calls with the people at work via Tencent Meeting. After work, your avatar plays a game of PlayerUnknown's Battlegrounds (PUBG), the online multiplayer battle royale game, where it wins a ticket to a virtual concert on Tencent's Kuwo Music. Noticing that you have conflicting events in your calendar, you sell the concert ticket on WeChat and swap it for a new outfit for your avatar. This type of scenario would involve gaming, social networking, video streaming, e-commerce, and financial transactions — which are all possible via Tencent.



5. JOBS IN THE METAVERSE

We are barely scratching the surface of the possibilities offered by the metaverse in terms of enterprise and career opportunities. And even though it's too early to say which opportunities will surface and which new jobs will start appearing, we can expect the possibilities to be virtually limitless. The skills required for the scifi-like jobs of the future will most definitely include knowledge of Al, big data, VR, and AR, but also an array of complementary skills, such as the all-important skill of creativity. We will likely see various interesting career options emerge, like system validation engineers, AR/VR maintenance and support staff, design architects, software designers, 3D artists, design/graphics engineers, and many more. Here's an overview of some futuristic jobs that may come into existence in the near future as the metaverse takes shape:



Asset advisor

With the proliferation of NFTs and more and more companies wanting to get their hands on a share of the metaverse action, a metaverse asset advisor might become one of the most important jobs. Much like a financial advisor in the real world, a metaverse asset advisor would make recommendations on which assets – like virtual real estate, or perhaps the Ethereum blockchain would make for a sound investment. A metaverse asset advisor would know the ins and outs of the industry and be able to assist you with finding those investments that will be most profitable. The skills required to become a metaverse asset advisor would include wealth management knowledge, risk assessment skills, interpersonal communication, and analytical skills.



Tour guide

As the metaverse comprises a limitless number of immersive worlds, it only makes sense that this will enable a new type of tourism, too. While YouTube and other major hosting services are increasingly expanding their collections of VR and AR content, VR tourism will be a new frontier. The metaverse will enable people to visit famous landmarks like the Louvre in Paris or the Pyramids of Giza, and even go to art exhibitions, music concerts, or any other place you'd like to visit. A metaverse tour guide will help you navigate from one fantastical world to another and show you all there is to experience, whether the destinations (also) exist in the real world or are merely imagined. Skills needed for a metaverse tour guide would probably include knowledge of arts and culture, pop culture, history and geography, gaming, interpersonal communication, and public speaking.



Cyber security expert

As is the case with the internet, the metaverse will also be a very interesting target for fraud and cyberattacks. Think NFT theft, biometric data leaks, hacked headsets, or compromised avatars. The chances for things in the metaverse to go pear-shaped are limitless. And virtual breaches could also have various real-world consequences and, for instance, lead to court cases. A metaverse cyber-security expert would be tasked with ensuring that attacks are blocked in real time and will take care of protocols and laws being drawn up and adhered to, so that roaming around the metaverse will be as safe as possible. To become a metaverse cybersecurity expert, you will probably need to have a cybersecurity background, in-depth knowledge of advanced technology, and a law degree.



5.4 JOBS IN THE METAVERSE

Digital fashion designer

In the metaverse, humans will be represented by avatars. For these avatars, we will need to have outfits to suit any mood or occasion, for work and for play. And as more and more real-world brands position themselves within the metaverse, we envision this becoming a booming career. Skills needed for a career in metaverse fashion design will likely include gaming and entertainment, textile design, history of fashion and art, illustration and graphics, styling and modelling, and 3D modelling and animation.

According to Gucci, it's only a matter of time before major fashion houses get into NFTs and other aspects of digital fashion. Many brands have already included digital garments into their collections. Dolce & Gabbana's Genesis Collection, for instance, was the brand's first collection that also included NFTs that could be digitally purchased and exchanged. During the collaboration between Balenciaga and Fortnite, digital garments were presented as limited edition drops, significantly raising the value of the highly sought-after pieces. And Balenciaga's fall 2021 collection was presented in a closed gaming environment called 'Afterworld: The Age of Tomorrow'.



UNXD and Dolce & Gabban

Event planners

With so many aspects of our lives already taking place online – from our increasing reliance on e-commerce to our digital representations on social media – the metaverse only seems to be a logical next step, an evolved version of the internet that offers a world of unlimited possibilities. The pandemic and lockdownsinduced migration of work into cyberspace has also had a knock-on effect on our social lives, with actual, inperson interaction increasingly being replaced by virtual meet-ups. And while this is becoming more and more normalised, the question we need to ask ourselves is why we would want or need to transition more and more into the online world, and what are the potential risks involved? In this section, we will talk about the potential drawbacks of the transition to the metaverse.



6. DRAWBACKS OF THE METAVERSE

With so many aspects of our lives already taking place online – from our increasing reliance on e-commerce to our digital representations on social media – the metaverse only seems to be a logical next step, an evolved version of the internet that offers a world of unlimited possibilities. The pandemic and lockdowns-induced migration of work into cyberspace has also had a knock-on effect on our social lives, with actual, in-person interaction increasingly being replaced by virtual meet-ups. And while this is becoming more and more normalised, the question we need to ask ourselves is why we would want or need to transition more and more into the online world, and what are the potential risks involved? In this section, we will talk about the potential drawbacks of the transition to the metaverse.



Technology replacing human relationships

Former Google CEO Eric Schmidt has expressed concerns about metaverse safety and usage in the coming years, particularly in terms of human relationships. Not only would the metaverse threaten human interaction, but it could also contribute to people increasingly choosing the virtual world over the real one. The metaverse is likely to lead to even fewer reasons to physically interact, fewer shared meals, celebrations, gatherings, public ceremonies, and more. Furthermore, the metaverse will enable people to be and do whatever they want; there will be no financial or physical constraints. The metaverse could be the place where everyone can feel happy and appreciated and increasingly become a safe and secure haven to retreat to when

real life becomes either a bother or simply too complicated or harsh to deal with.

According to Dr Elias Aboujaoude, Stanford psychiatrist and author of Virtually You, The Dangerous Powers of the E-Personality, "It is possible that virtual reality may drastically change a person's social and emotional needs over time. We may stop 'needing' or craving real social interactions because they may become foreign to us. It doesn't mean that they can't make our lives better; it means that we, as a culture, are no longer aware of them and of their positive effects on our lives, because we are so immersed in virtual life and have been for some time."



Increasing inequality

The increasing inequalities we're already seeing in terms of the digital divide are quite likely to become even more pronounced in the metaverse. Cyberpsychology specialist at Edge Hill University, Dr Linda Kaye, says: "While the metaverse could be great for people who have the bandwidth, connectivity, and the hardware to engage, it could create an even bigger barrier for people who might already be digitally excluded, which would actually serve the opposite purpose to their plans to connect people." And Leo Gebbie, VR/AR analyst at research firm CCS Insights says: "There's a danger that while a percentage of people in the UK and US could be living, working, making money and socialising in the metaverse, they could be cut off entirely from other demographics – effectively creating a two-tier system of who's connected and who's not."



Privacy, security, and ethics

Another aspect of the metaverse that might not get enough attention is privacy and security. One example is the policies that enable third parties to collect data about users and their friends while ignoring content that could be harmful to children and teens, even though Mark Zuckerberg has mentioned that interoperability, privacy, open standards, and safety will all be built directly into the metaverse from the start. Zuckerberg also mentioned that everyone else who is building for the metaverse should be doing so responsibly from the very beginning.

In the metaverse, marketers and advertising agencies will be able to track which virtual environments a person goes into and how long he or she stays there, body movement,



eye movement, brainwaves, and physiological responses to an experience. There have already been various incidents where personal and even medical information from millions of Americans has been exposed. And while some users might be aware that their data is shared with third

parties, many are of the opinion that they don't have much control over it. And as more and more people venture into the metaverse with their AIenabled devices, AR glasses and VR headsets, it's worrisome to think what might happen.

Kavya Pearlman, founder and CEO of XR Safety Initiative, an organisation with a mission to help build safe immersive ecosystems, says: "In a new world where we extend reality and defy reality, a world where data fuels the progress we make in the metaverse, we have to hold big tech accountable for transparency and ethical use of data being collected. This is why at XR Safety Initiative, we continue to help build guidelines around privacy, ethics, and safety for the emerging realities."

Virtual addiction and 'enslavement'

While immersive virtual business meetings or social gatherings may seem harmless, the enormous potential costs of the metaverse could include increasing detachment from reality and virtual reality addiction. The metaverse could either be a digital paradise or the most addictive thing ever created. Most people are already becoming increasingly dependent on their screens and technology, so we can only imagine how much more addictive the fully immersive metaverse will be where all of our senses will be even more fully engaged and real life will increasingly move to the background.

It's important not to underestimate the power of escapism that might further aggravate detachment and withdrawal from reality. Sheila Hageman, communications director at the Centre for Internet and Technology Addiction

(CITA), says: "Our feel-good chemical dopamine is released in our bodies and it feels great - gaming, social media use, and surfing the web create a self-reinforcing cycle that keeps making us want more of that rush."

Pioneer, architect and advisor in AR, VR, and MR. Avi Bar-Zeev, has been working on metaverse technology for three decades. He helped Microsoft develop its MR headset Hololens, created an AR cloud prototype for Bing, and worked with Second Life to help define the platform's technology. On the rise of metaverses, Bar-Zeev tells Forbes magazine: "Hopefully we'll have the right infrastructure and systems in place for the best outcomes to happen and not the worst. And the worst could be pretty bad. The worst could be basically virtual enslavement, where our devices are controlling what we see and implicitly controlling what we do, and we lose our freedom of thought. We lose our freedom to have our political views and whatever spectrums we want them to be. And so there's a real danger there. And because this technology is so much more powerful than television or the internet has been, I'd say it's another 10X more powerful."



7. THE FUTURE: BLURRING THE LINES BETWEEN OUR PHYSICAL AND VIRTUAL WORLDS

The past couple of years have seen the emergence of new types of all-encompassing entertainment experiences that aim to offer everything – and in turn demand all of our time and attention. And to be able to grab a piece of our attention, everything competes with everything. It's Fortnite against Netflix against TikTok. And this is how the metaverse will most likely be – like we're already seeing with social media platforms.

7.0 THE FUTURE: BLURRING THE LINES BETWEEN OUR PHYSICAL AND VIRTUAL WORLDS

There will be many more than just one, and they will all be competing for our time and a share of the market. The metaverse(s) will probably arrive gradually, in the form of small add-ons that eventually blend into something bigger. Like a virtual Facebook cinema where you can watch movies with friends, or a social space added onto Minecraft, or Amazon and Netflix venturing into creating games, or Fortnite attracting players with a free video game and eventually incorporating metaverse aspects.

Matthew Ball thinks the metaverse will be a living experience that consistently exists, in real time and for everyone. Ball says: "Chances are that huge multinationals will be dominating the metaverse and all our data within it. It's likely to produce trillions in value as a new computing platform or content medium. In its full version it becomes the gateway to most digital experiences, a key component of all physical ones, and the next great labour platform." We will need to ask ourselves, however, why we would actually want or need a metaverse. We will need to remember why the citizens of Snow Crash and Ready, Player One embraced the metaverse so wholeheartedly: because these are stories of a dystopian future world destroyed by climate change or corrupted by corporate oligarchies, making escaping into a virtual universe a very welcome reprieve and practically inevitable.

As futurist and keynote speaker Richard van Hooijdonk says, "These metaverse developments were, of course, bound to happen; the worldwide lockdowns have had people imagining exactly such a realm – a Ready, Player One world where we can be the best versions of our imagined selves and do things that we could previously only imagine doing, ushering in a new, always-online era. And while we don't yet know exactly what the metaverse(s) will be like, we have the opportunity to create something really amazing – a world that will be accessible, beneficial, and fair to all people, no matter who or where they are."

Visit <u>richardvanhooijdonk.com</u> for inspiring content, videos and bookings.

This e-book is also available in Dutch.

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