



# DIGITAL TRANSFORMATION - THE NEW UNIVERSE OF METAVERSE



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## Introduction

**T**im Burners-Lee invented world wide web (www) in 1989. This ground-breaking invention transcended geographical boundaries and helped information and communication technology (ICT) professionals creating and delivering multifarious applications and solutions over cyberspace. Certain major examples are hyperlinks, videoconferencing, eCommece platforms, videogames, voluminous documents delivery, multidimensional viewing of tangible products, and so on. This journey, riding on www, to deliver innovative solutions is continuing even in present Industry 4.0 era.

Through the process of evolution of scientists also created virtual environment to gloss over reality through applications of digital technologies, viz., virtual reality (VR) augmented reality (AR) and hybrid version of these two called mixed reality (MR). These are collectively known as Immersive Technologies (ImTs). Such creation of virtual versions simplified the process and

enabled product managers to bring customers near to synchronous versions of real-world tangible objects without physically being near, albeit not being possible to be touched, felt, and smelt. The author has covered these in his paper published in May 2020<sup>1</sup> under this column digital transformation. The present article is an extension of the same towards the virtual universe of Metaverse.

## Migration from Real to Virtual

ImTs are mainly being used by digital marketers of industry sectors like tourism and hospitality, motor vehicles, real estate, fashion retailing etc. Aided by a specially created headset a customer can visually experience with sound effects an exotic hilly tourist spot, the cabin of a car, a dwelling unit, a hotel room, etc. However, what one trusts may not be the truth, or what is truth may not be what one trusts. This phrasal expression has been used by the author while writing on the benefits of blockchain technology which bridges the gap between trust and truth by establishing only one version of truth with transparency. But perhaps once more one needs to validate it in the context of virtual reality

Netizens, particularly of generation Z and A and are more and more becoming keen to experience what all virtual objects are being brought to their handheld devices through internet. Such a gradual perceptible migration from real to virtual is mainly because they find huge potentials for saving time, money, and energy for validating a physical object before they decide to buy, adopt, visit and spend money.

So far people have played the game of chess, cards, fighting, expedition, motor racing, etc using a smart phone, tab, or a laptop computer in which the opponent was not visible. But imagine a situation that real pugilist is physically ushered into a boxing ring for competing with another boxer, and after playing for some time she/he realises that there was no human being as an opponent but a hologram. How it could be possible? Perhaps, that is the objective behind creating Metaverse applications for

*Image Source:* <https://www.market-prospects.com/articles/what-is-the-metaverse>

transforming a real object to a virtual one and providing near synchronous experience to users, albeit being put into use in asynchronous mode. Power of cognitive technologies like AI would also be used for such virtual creatives, their beautification, and assigning with attributes of real-life objects.

### Genesis of Metaverse

The genesis of the word ‘Meta’ is in the Greek word ‘meta ta physika’ which means beyond the nature or this physical world. It posits a doctrine of something that exists beyond sense or perception of a human being. If the portion ‘physical’ in the word ‘metaphysical’ is replaced by a truncated portion of the word universe, i. e., verse, the new word that gets formed is ‘Metaverse.’ In a layman’s understanding, therefore, it means something that exists beyond this universe. One can find corroboration of this idea in the definition of Metaverse provided by Oxford Dictionary which writes “.... noun Computing... a virtual-reality space in which users can interact with a computer-generated environment and other user. – ORIGIN 1990s: blend of meta- (SENSE 3) + and universe.”

Common men mostly have come to know about this phrase ‘Metaverse’ sometime in late October 202 when Mark Zuckerberg changed the name of ‘facebook’ to ‘Meta’. Perhaps one of his objectives was to elevate operations of this entity with a quantum leap to the next frontier by unifying the perceivably disparate digital world into the new buzzword called Metaverse. Strategically this change may also help him to come out of the hitherto branded, arguably with a bit of tarnished image, social media company and migrate to the new world of 3D virtual space for many more business proposition.

### More about Metaverse

Neel Stephenson, an American speculative fiction writer of eminence, coined the term Metaverse in 1992 to elucidate the concept of 3D virtual space. Readers may have anxiety as to when Metaverse would be operational and how far it is away. Factual position is that miniature versions of Metaverse are already being used by certain organisations by applications of immersive technologies, as has been narrated above. A famous venture

capitalist Matthew Ball<sup>2</sup> is of the view that, “*The Metaverse is an expansive network of persistent, real-time rendered 3D worlds and simulations that support continuity of identity, objects, history, payments, entitlements, and can be experienced synchronously by an effectively unlimited number of users, each with an individual sense of presence*”.

Common and simplistic belief that are discussed around the corridors and corners of ICT and digital technology laboratories, Metaverse is not any new digital technology like Blockchain, AI, AR, VR, etc. One section of them is of the view, albeit may not finally prove to be true, that if the word Metaverse is replaced by the word cyberspace, most of its meaning will not change. It will never be able to replace internet but will help bringing in many more transformations iteratively with integration of many more technological innovations. In other words, major technologies that gets infused into Metaverse are VR, AR, and MR, powered by cognitive technologies, and attributed by insistent virtual worlds which continue even when one is not actively and directly participating in the process. Augmented reality essays to combine the features of digital and physical worlds.

Eric Ravenscraft, an eminent product reviewer and writer opined that, “*The flashiness of VR and AR also obscure the more mundane aspects of the metaverse that might be more likely to come to fruition. It would be trivially easy for tech companies to invent, say, an open digital avatar standard, a type of file that includes characteristics you might enter into a character creator—like eye color, hairstyle, or clothing options—and let you take it everywhere. There’s no need to build a more comfortable VR headset for that.*”<sup>3</sup>

The author would like to imagine that the present version of virtual conference facility, provided by Zoom, Microsoft, Google, etc., may evolve to be a near synchronous experience of participants. This may be brought to reality by digital scientists when capabilities of ImTs are upgraded and further virtualised using the power of cognitive technologies. Metaverse would continue to evolve with innovative applications as are being ideated and proposed to be embedded even at this early state of creating Metaverse.



Source: <https://www.techrepublic.com/article/meta-ceo-zuckerberg-predicts-the-metaverse-will-be-mainstream-in-5-10-years/>

If readers see the above picture, she/he prima facie may not be able to observe any difference in appearance between the fighter in white dress as compared to the player in turquoise blue colour dress. Both may appear to be the pictures of two real life fighters. Before the riddle is solved, it would be useful to read the following news item published by Tech Republic on October 28, 2021<sup>4</sup> – “In the opening keynote of Connect 2021, Mark Zuckerberg fenced with the hologram of an Olympic champion, attended a work meeting with humans and a giant red robot and played a surfing game with a face full of sunscreen. He admitted that it’s still very early days for the metaverse but said he and his company are focused on the future. That future includes a new name: Meta.”

Having read it readers must have understood that the fighter donning the turquoise blue coloured dress is not the picture of a man with physical presence. Actually the player in white dress was fighting almost synchronously with an object created by digital technology using hologram as a concept. Metaverse is expected to provide similar experience to users. It would be worthwhile to know what a hologram is. Merriam Webster Dictionary has defined hologram as “a three-dimensional image reproduced from a pattern of interference produced by a split coherent beam of radiation (such as a laser) also: the pattern of interference itself.”

### Contemplated Benefits from Metaverse

Effectively Metaverse will facilitate migration from physical world to a new highly interactive virtual place to entertain, shop, train people, play game, socialise, interact with human beings, humanoids, and bots, etc. People have felt the need and visualised the benefits of Metaverse while working from home and virtually interacting with others during Covid-19 Pandemic. One, can therefore contemplate the following benefits from Metaverse by:

- ⊙ Reducing limitations of the physical world for performing certain activities that may initially be tested in a virtual space.
- ⊙ Meeting some of the challenges of working from a location away from the originally designated workplace.
- ⊙ Improving delivery of medical and healthcare services with 3D visualisation and improved interactions in a virtually live or pre-recorded environment.
- ⊙ Performing marketing activities in more customer friendly virtual environment and providing them near actual

facilities for knowing the product more, better assessing it, and validating claims of manufacturers.

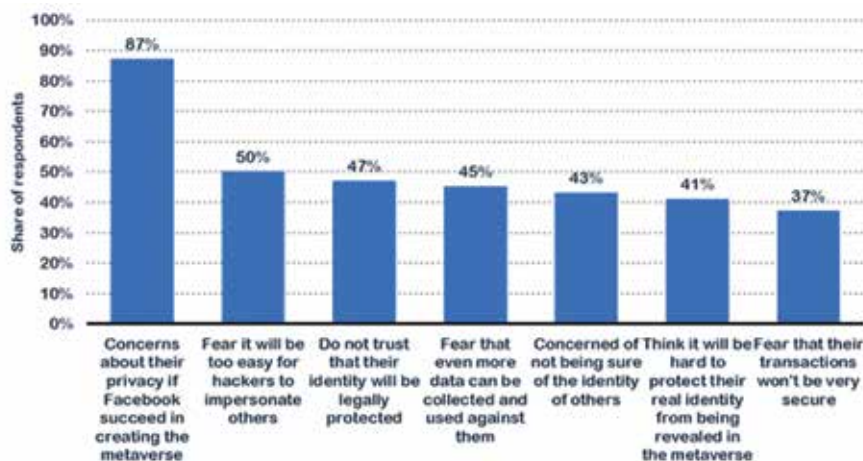
- ⊙ Offering better facilities and improved resources for eLearning with 3D visualisation.
- ⊙ Improving asynchronous mode of teaching, training, conducting practical classes with improved illustrations through virtual creatives for what could have been in physical mode
- ⊙ Enhancing effectiveness of interpersonal communications with higher expositions of behavioural traits and emotional intelligence.
- ⊙ Providing more enjoyment from virtual gaming and entertainment programs by artists and specialists.

However, more research must be conducted for validating all these benefits from Metaverse that are presently being contemplated. However, as digital technologies and scientists have so far delivered very many wonderful solutions for the benefit of mankind, one can be hopeful about the above are also being realities in course of time.

### Concerns about Metaverse

The author urges readers not to take this section in a negative sense and consider that he is advocating against Metaverse. The author has supported digital transformation in his previous thirty articles with the predominant objectives of shared benefits for all stakeholders and, also common men across societal strata in all regions and continents under the sun. His appeal has always been for introducing global code of standards and directional guidance by multilateral agencies. The goal behind such codes and guidelines should be to ensure that applications of digital technologies are done in compliance with human rights, sustainable development are achieved for making the world a better place to live and for handing over an improved world to the next generation. He has no different view about Metaverse also.

One should be responsible enough to be consciously aware of the probable negative effects of everything and think many times about the evils so that one can plan for minimisation of value destruction before plunging into action. The following table represents results of a survey conducted in December 2021 amongst 1,002 consumers of the USA with age above eighteen years. They have expressed concerns about the risks that may be posed to them if Metaverse is implemented.



Source: Statista Source(s): Propeller Insights; NordVPN; Social Media Today; ID 1288065 <https://ezproxy.svkm.ac.in:2307/statistics/1288065/united-states-adults-concerns-about-the-metaverse/>



It is evident from the above table that 87% of the people surveyed were deeply worried about their privacy if Facebook meets success in implementing Metaverse. 50% of them are apprehensive about its users being impersonated by cybercriminals and 47% are in a state of trust deficit about their identity being legally protected. 45% to 37% of them are anxious about more of their data being collected and used against them, not knowing the identity of the other person with whom they would interact, security of the transactions they perform in a Metaverse environment, etc.

Such concerns and anxieties of a common man of the USA, regarding multifaceted risks elements that may be inherent in commercial exploitations of Metaverse, might have echoed most of the users across the world. People might be thinking one step ahead, having been frightened by what all negatives are happening, as well as risks and adversities they are exposed to while using social media platforms. The fear of unknown, i. e., Metaverse is also working in the back of their mind. One school of thought in the financial market of western world that such perceptive concerns of users surrounding Metaverse may be one of the reasons for share price of Facebook gyrating by about 24% post announcement by Zuckerberg about his company changing its brand name to 'Meta'.

The world of digital giants is divided in their views about Metaverse. Many of them are not sure whether Metaverse is a socially viable, desirable, and acceptable proposition for digital transformation. The author's research also detected difference in opinion on whether it should be exploited for business purposes to earn profit. Lewis White wrote in *stealthoptional.com*<sup>5</sup> on January 11, 2022, the following: "Apple says 'No' to The Metaverse .... Reported by Bloomberg write Mark Gurman, Apple isn't looking to participate in the Metaverse race .... The idea of a virtual world where users can escape to – like they can in Meta Platform/facbook's vision of the future is off limits. .... However, executives at the highest level of the company have pushed for virtual reality." **MA**

### Conclusion

Metaverse as a solution, with combined applications of several digital technologies, is still evolving from its present nascent stage. While there are lots of optimism for delivering better solutions with benefits to users and humanity as whole, there are also anxieties and fear of unknown. The author is of the view that there is enormous scope for more research as well as developing and testing solutions. It would be too early to conclude about Metaverse either way. Let optimism and efforts of digital scientists be successful in achieving all objectives and minimising evils and ill effects to near zero. Lots will depend on business organisations and user community so that nothing is done being driven by greed and gluttony for money. Each one must ensure sustainable benefits for mankind in compliance with all human right as the ultimate objective.

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