



EFFECTS ON DIGITAL CIVILIZATION AND VIRTUAL REVOLUTION – THE ERA OF PERCEIVING METAVERSE – ON ORGANIZATIONAL REVIEW BASED APPROACH

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Abstract: Digitally modernized civilization is gaining attention among the current generation and creating a virtual revolution. Ingenious opportunities based on the Metaverse, in every possible enterprise sector, Augmented Reality (AR) supplementing our creative imagination in the existing real world through Virtual Reality constitutes the era of digital civilization-The Metaverse. The disposition of a person concerning their interest in trending technologies and gaining knowledge intrudes on their skill based on their adaptability. Being amicable and diplomatic, as well as requiring all activities to be conducted anonymously aids in the security of individual metadata. When it comes to the more significant sector, Big-Data is refined meticulously, considering the sustenance of people's privacy and security. Prominent professionals with extensive experience within a prestigious organization are constantly eager to learn new trends and technologies, elevate themselves as well as the management they occupy. Metaverse technology aids the stakeholder's fundamental concerns and cutting-edge protocols in virtual space. Life will eventually be redesigned with the inventiveness of AI- technology with 3D Avatars and block-chain analysis. In due course, the gaming points, NFTS and Crypto currency will be attaining their virtual value to the point where people will forget to use their genuine physical wallets. Data mining and sharing become appreciably valuable including web3.0 at 5G if educating and handling themselves includes time-saving strategies, money and data thefts. Summarizing this article based on virtual lifestyle drift and the opportunities inside the virtual sphere while adapting such core challenging technology with conciliating efficacy.

Key Word: Digital-Civilization, Metaverse, Augmented Reality (AR), Virtual Reality (VR), 3D Avatars, Block chain, Big Data, Technology, opportunity, Virtual Revolution.

1. INTRODUCTION:

Civilization is getting modernized digitally as well in the world of metaverse. Tremendous opportunities along with extensive application is getting jet rocketing for virtually inclined aspirants. AR and VR skills compliments the job hunters to step into the virtual world. Presently, our generation is getting courageous in taking up the trending technologies as part of their career curriculums. Metaverse being the technologies state of art, virtual platform is becoming capacious with wide varieties of chances, also connecting people at various level of interest. Technology storm binds the real world and virtual world through an augmented- virtual reality say the Metaverse. Survival begins with a new level of experience inside digital platform at a frequency of 5G/6G with self-designed virtual 3D characters called Avatars. Inside the distort space, the mobility of the people becomes multifaceted. People can exclusively create their own customized digital human avatars and travel easily with versatility. Multiple screen functions are adaptable through metaverse still being in our own real physical world. Every real-world scenario can be obtained within metaverse through AR-VR along with other necessary factors forming a Mixed reality. The Virtual headset is being used to experience the virtual reality and the animated characters in a 3d way. Whereas the Augmented Reality helps in blending the system generated information with the real world in an interactive way. Innumerable ways of fabrication with the areas like production, manufacturing, demos, trainings, services and channelized perforations by the use of VR-AR can be employed based on the pipeline of organization development architecture. Corporate sector earns a wide opportunity into digital civilization right from procurement till execution of entire task successfully. Connection between digital humans and real-end users elevates drastically and makes way for innovative technologies and intellectual internet applications increased the thirst that conglomerates Time, Commerce, Trade, Marketing, Advertising, Purchase, Promotional Transactions Virtually with the virtual merry lands. Irrespective of Age, Gender, Physical abilities and agile circumstances Metaverse provides strong workspace which is clearly mentioned by Albrecht Schmidt¹ et al **“While it can be applied in every production environment, a sheltered work based organization employing persons with impairments. However, it had a "catalytic" effect on the test subjects' work quality”**



This article summarizes the effect of Digital Civilization and Revolution happening in Virtual Sphere creating a new ERA constructively within several organizational developments. Countless operational and Training based implementation shall conduits with new technologies there by uplifting the overall expansion of the business in a broader and infinite digital environment. A phenomenal RFID-Networking with Blockchain at 5G becomes powerful cluster of opportunity generating spectrum.

2. RESEARCH METHODOLOGY:

2.1 Period of Study:

The Study is developed based on available opportunities for the employees at various enterprises in adapting VR-AR towards Extended Reality within the organization in Chennai for the period from 2 months.

2.2 Data Collection:

Effective analysis is being done through various secondary sources available in the internet. Prominently cited information from renowned research-oriented webpages is also considered. This will be widely helping the community-spectators in deciding their interest, career upgradation, restyling and investment.

2.3 Sample Design Patterns:

The samples and aided necessary data are observed from various secondary data, Technology related employees and job portals through Human Resource sectors in the organization. As per available information the opportunity for metaverse is more predominant

2.4 Data Analysis:

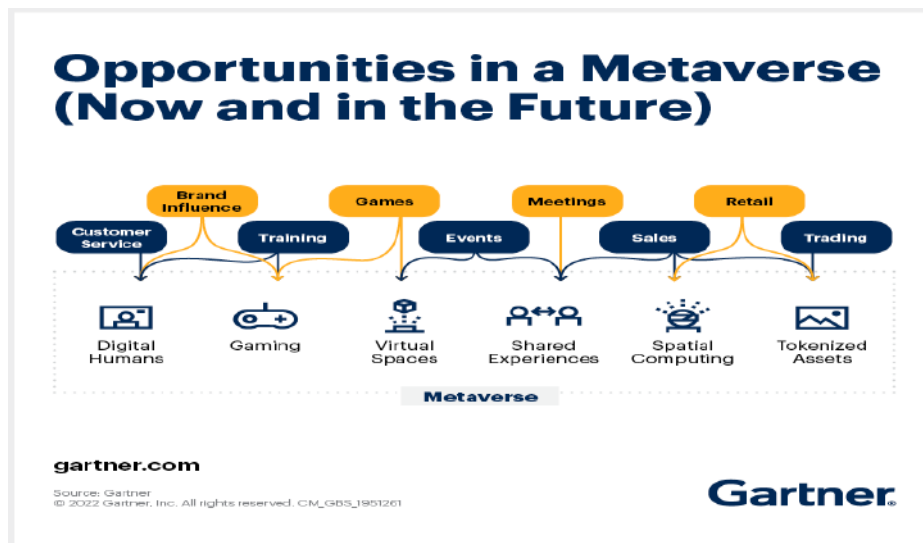
With the proceeding of interested employees and HR involvement towards the development of the organization from approved IT based sectors out of the secondary resources are considered. VR & AR, opens up opportunities for digital Applications, virtual pocket planners, digital environment and so on. Anonymous user need to be handled with security threats that are to be considered meticulously and reviewed for future scopes based on real time test experiences, implementations eventually.

3. OBJECTIVES:

The study is based on the digital civilization were metaverse being the core trend setter and how people can adapt and utilize as a upskilling opportunities at various sector.

4. PERCEPTION OF CORPORATE METAVERSE:

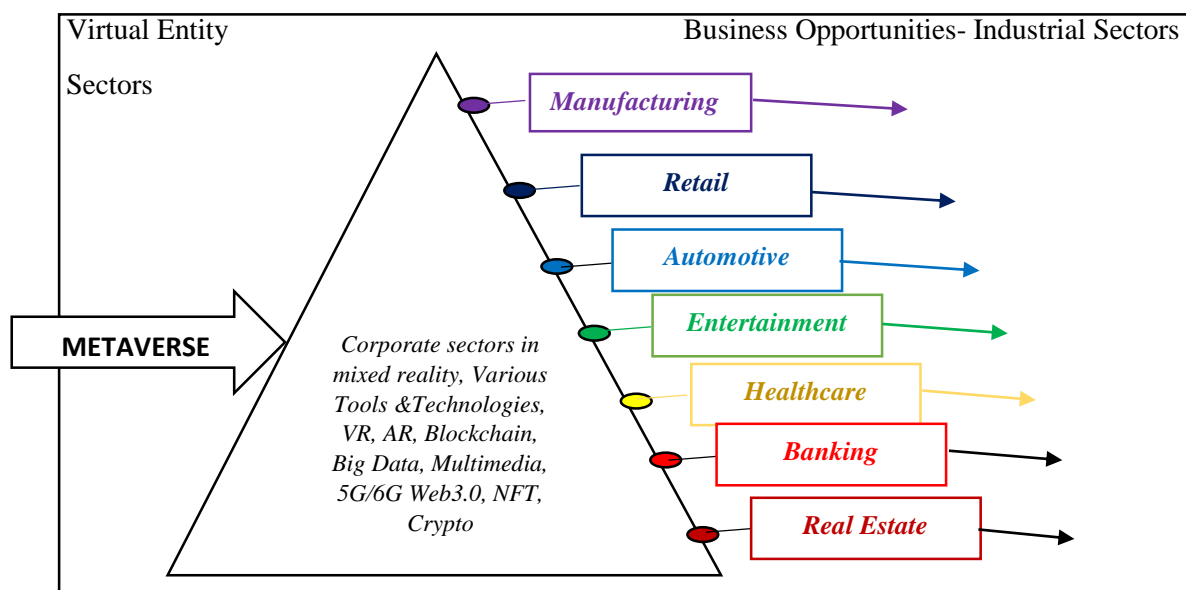
Although it is becoming lucid when comes to the concept of metaverse, the actual definition is still a myth to understand to be understood. Pandemic period made us to relay on Extended Reality mode of working in order to keep the business moving on without a halt. Many big brands started to utilize the mixed reality platform in establishing their business, connect with wide range of people, various level of community. All about metaverse is all about internet, Eric in his article says about it as "Selling a gadget is fine, but selling the future is more profitable. In reality, it may be the case that any real "metaverse" would be little more than some cool VR games, concerts, and digital avatars in Zoom calls, but mostly just something we still think of as the internet". While discussing about perception of metaverse, Judy Joshua² (2017) in his writings explains about "Perceptual entrainment through the embodied encounter with tools. My analysis of the body/tool/perception nexus in Neal Stephenson's *Snow Crash* (1992) introduces the concept of perceptual entrainment in two steps technology interface:" Virtual interaction with real entity in a gaming application initiates the urge for technology innovation and now we are apprehending with METAVERSE. Corporate world can create business opportunities in virtual space as well. Experienced and interested employee would be in great demand for the organized jobs. Anecdotally, the essence of metaverse has been rendered from 1992 in Snow Crash till Facebook "Meta" by Mark Zuckerberg (2021) where in the user can create and hold account in meta and also allows to mix technology with data through ads creation. He also states that metaverse becomes the future of internet and large network-based communication takes place in the Virtual ecosystem through 3D Avatars says Satya Nadella similar to the real-world personal interaction in Forbes (2022). Renowned technology research-oriented GARTNER widely explains in his article about the possible opportunities and scope of employment based on metaverse in an organization after various factor analysis. Cryptos and NFT's will be on major consideration in-order to avoid physical money theft, demonetization alerts, and hindrance in carrying lump sum of money. Transaction becomes easy and economic, still having ways to use our personal physical wallet with every denomination.



Reference Picture1: Business Opportunities in metaverse (now and in Future) –Image reference from google- Gartner

5. POSSIBLE INDUSTRIAL 4.0 SECTORS WITH VR-AR TRANSFORMATION

Gradually, there are wide spectrum of business opportunities possible probabilities within virtual sphere. Among them 7major industrial sectors that has next level of virtual innovative. Getting Digitalized keeps the business in fast phase with automation. Chat Bots and automated systematic applications were widely becoming reality in a customized way. The sample image representation implies trending technology with traditional industrial sectors involve themselves into digital culture and elevates the entire enterprise development eventually.



Sample Picture2: 7major metaverse business opportunities in industrial sector with Virtual entity

Military, Aerospace, Aerodynamics, Education, cyber security, Finance, Media and other service sectors have an impact with respect to metaverse. Blending physical and digital world into a corporate business in every sector creates extended business opportunities for interested people articulating their career significantly and effectively. Esteemed organization have started their recruitments through human resource virtually and in person, requirements were filled based on the employee skillsets and experiences above all, employee is considered the asset of any organization their interest towards Learning and development becomes pivotal. Top companies to name a few, like Google, Microsoft, Sandbox, Unity Software, Gucci, Amazon, Snapchat, Epic games are already building their business in the Metaverse. In India investing stakeholders over metaverse includes Hyperlink info system, Fingent, Deloitte, Accenture, Tech Mahindra, Infosys, Tcs were the major stake holders from India invested in Metaverse -as per business journal resources. Also, Rameshwar Dubey5, in his article mentions about the sectors like marketing, education, tourism, healthcare that



has societal impacts. He also adds Virtual environments and immersive games such as, Second Life, Fortnite, Roblox and VR (Chat) have been described as antecedents of the metaverse and offer some insight to the potential socio-economic impact of a fully functional persistent cross platform metaverse holds a wide range of interlinks.

6. GLIMPSE ON VR-AR-XR:

General understanding of Virtual Reality (VR), Augmented Reality (AR), Metaverse (XR) based on user experiences, feasibility in understanding, designing and experiencing the tools and technologies involved at organizational level. The following simple reference table1 gives a glimpse on VR-AR-XR for a quick wit.

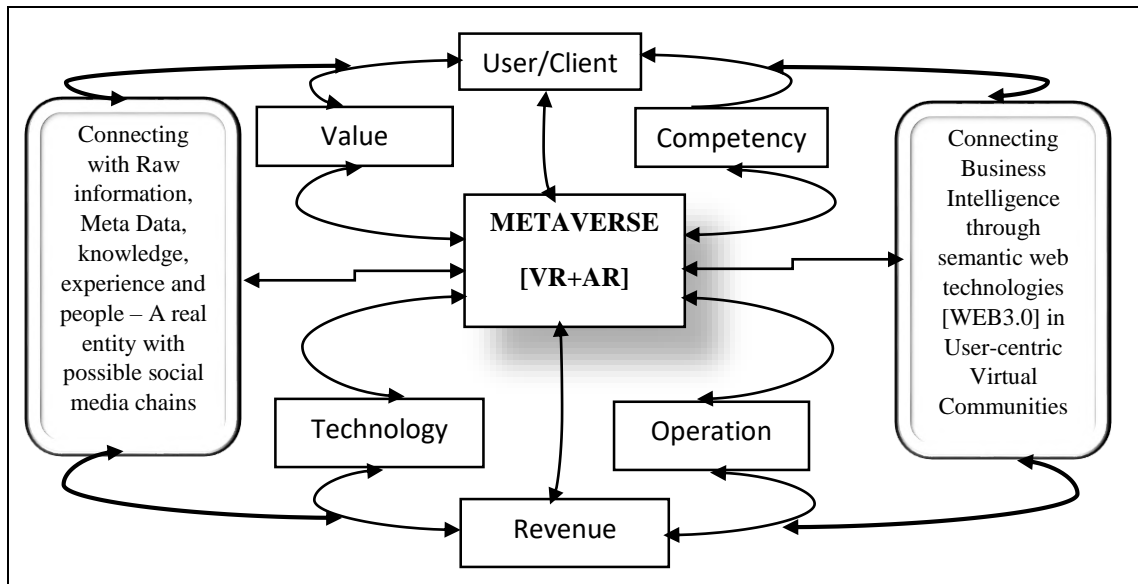
Attributes	Virtual Reality (VR)	Augmented Reality (AR)	Metaverse (XR)
Illustration	Virtual Reality (VR) is the technology used to develop 3D impressive Environments with the factors of vision, volume, features, gestures, nudge and other sensory stimuli.	Augmented Reality (AR) is real-time environment modification interacting with sound, visual effects and relative sensory features, with pre-integrated contents	Metaverse is like Mixed Reality [VR+AR], is fictitious, Virtual Entity shared anonymously. Connectivity between users and information through Avatars.
Possession	Identity is via the trademarks and device manufactures	Affiliate Agencies, companies and such collective resources stores the available meta data in a block chain repository	User governs Ownership and their data, liable virtual assets and information's
Technology	VR works with limited preorganised simulations, tools and technologies	Allied technologies like sensory tracking, stylus, GPS, mapping, RFID, multimedia and other technologies bridging together	Metaverse is open and adaptive towards technologies like VR, AR, XR facilitates futuristically.
Significance	User experiences the VR with limited utility specification	Users design the graphics, videos, Virtual metrics that interacts relatively with real world.	Infinite possibility for users to experience
Endurance	VR is active until the device is alive	Use case is developed based on industrial requirements	A perceptual and partaken virtual world, a combination of VR and AR

Reference table1: Explains the characteristic features of VR-AR-XR

7. Rise of Remote Working in Virtual Public Sphere – Futuristic Approach:

Chronicle of Virtual World came to existence during the yester years say 1992 through snowcrash. According to a real time survey performed by Mckinsey corporations, 60% of the users were engaged in everyday activities into metaverse with complete awareness and approximately 95% of business investors are readily welcoming metaverse with a positive note. Even without any prior experience and background, Gaming Technology through multimedia shoots up with an advancing technology where web1.0 (read mode) became 2.0 (interactive mode) and now WEB3.0 (Interact, Involve and apply) with a shift from 4G internet to 5G/6G telecommunication. "The integration of various forms of technology, such as NFT, cryptocurrencies, blockchain, IoT, artificial intelligence, and machine learning, will be

beneficial to the metaverse as a platform business model” says Srinivasan periyasamy⁴ in his article, (2022). The speed of Data Mining, Retrieving, collaborating with IOT level of business as well any individual is highly futuristic. Every functional block involved is a wide area job opportunities creating the demand for experienced candidates in the upcoming days. Sample picture³ illustrates the basic functionality of metaverse at business environment.



Sample picture³: Basic functional features of Metaverse with respect to Business environment

Virtual space functions with certain diplomatic features like Trust, Data security, Tools, Artificial Intelligence, BigData Analysis and so on. Extensive value-added chances can be grabbed, as they are in demand in this Cyber space. Emotional Intelligence and Emotional Stability are being discussed by Kartik hosanagar³, (2021) “Recently, Artificial Intelligence (AI) has been used to enable efficient decision-making in managerial and organizational contexts, ranging from employment to dismissal”. These are the future opportunity for a AI developer-based jobseekers among any business organization. This Includes, 6 primary metaverse elements paramount with 8 metaverse technologies comprising a solid foundational pillar of the ecosystem that supports any business successfully with data adequacy.

6.1 Primary Elements in Metaverse – A Digital Ecosystem:

- Avatar Creators: - User Identity - Representation of Real end user – virtual Avatar
- Content Creators: - Brainstorming - Virtual Reality with respect to user defined and relative data Authenticity, Accountability and Acceptability.
- Virtual Pocket Creators: - Virtual Economy- Partaking the Economic Crises and Decentralization through Decentralized land, asset management, Low Carbon – CRYPTO, NFT based transactions avoiding bankruptcy, bureaucratic corruption and theft.
- Social Entity: - User Diversity – Cyber security, User involved interaction and addiction towards virtual world.
- Security: - Privacy - Educating diplomatic fare trade on consensus data sharing in surrealistic Anonymity.
- Trust-Building: - Digital ethnicity based on avatar surrogacy.

6.2 Paramounting 8 Metaverse Technologies:

- Network: - Developing Capability, Exposure, Data-Network slicing, social media connectivity establishing Virtual Reality civilization.
- Cloud: - Edge Binding, Cloud Computing and Data Compounding Protocols.
- Artificial Intelligence: - Automatic and constant interaction for Digital Twins – VR - AR
- Virtual Vision: - Ontology based on Human-Virtual Avatar – interconnecting every NLP gestures even at micro and Nano level of pixel expressions.
- Blockchain: - Data Transparency and privacy
- Robotic – IOT: - Interaction between Extended Reality -social robots involving with immersive robotics.
- User activity: - Inter and Intra level telecommunication- omnipresent
- Extended Reality: - Quality interaction with VR-AR mode, Quantity based used collaboration



These are the solid pillars with high employment opportunities in any business sectors for the upcoming and upskilling employees.

7. REVIEW OF LITERATURE:

Albrecht Schmidt¹, et al, 2013 clearly explains about the opportunities for impaired persons in the article “The potentials of in-situ-projection for augmented workplaces in production: a study with impaired persons”. Although virtual reality came to existence in 1992, as mentioned by Judy Joshua², 2017, in his research article “Computational Anxiety in Neal Stephenson's *Snow Crash*”. Kartik Hosanagar³, et al, 2021 shares the interaction between real world and virtual entity in their article “Human-AI Interaction in Human Resource Management: Understanding Why Employees Resist Algorithmic Evaluation at Workplaces and How to Mitigate Burdens”. Similarly, Saravanan Periyasami⁴, et al, 2022 explains the challenges and opportunities, data privacy, transparency, security that are involved at enterprise level in his article “Metaverse as Future Promising Platform Business Model: Case Study on Fashion Value Chain”. Also, Rameshwar Dubey⁵, et al, 2022, illustrates in his article about enormous opportunity in different sectors in his article “Metaverse beyond the hype: Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy”.

8. CONCLUSION AND SUGGESTIONS:

In due Course, after considering various elements and respondents' interest, it is understandable that technically established firms, IT and IOT based employees were interested in taking VR, AR consistently. With Constructive and conventional guidelines and grounded restrictions from baseline, Metaverse can be significantly effective in developing the organization at every stage. As a consequence, every organization investing in metaverse mixed reality need to be adaptable inside the scope of human resource policies, along with orthodox training is being recommended. Efficacious capital investment with inclusive of strategic Cost Cutting and systematic time management is being deployed while furnishing with new technologies. Available information with upcoming trial period, the present-day study is considered and assured for digital ecosystem. Constructive and progressive measures have been proposed along with various support analysis to the organizations whose employees are interested in taking up the virtual opportunities, as everyone is aware of the pros and cons of the digital usage in our lifestyle with compatibility and adaptive nature. This helps in sustaining with new digital revolution, in a civilized Extended Reality.

REFERENCES:

1. Albrecht Schmidt. et al, 2013 “The potentials of in-situ-projection for augmented workplaces in production: a study with impaired persons”, doi.org/10.1145/2468356.246853.
2. Judy Joshua, 2017, “Computational Anxiety in Neal Stephenson's *Snow Crash*”, doi.org/10.5325/intelitestud.19.1.0017.
3. Kartik Hosanagar, et al, 2021 “Human-AI Interaction in Human Resource Management: Understanding Why Employees Resist Algorithmic Evaluation at Workplaces and How to Mitigate Burdens”, doi.org/10.1145/3411764.3445304.
4. Similarly, Saravanan Periyasami, et al, 2022 “Metaverse as Future Promising Platform Business Model: Case Study on Fashion Value Chain”, doi.org/10.3390/businesses2040033.
5. Rameshwar Dubey, et al, 2022, “Metaverse beyond the hype: Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy”, doi.org/10.1016/j.ijinfomgt.2022.102542.
6. Ersin Dincelli, et al, 2022 “Immersive virtual reality in the age of the Metaverse: A hybrid-narrative review based on the technology affordance perspective”, doi.org/10.1016/j.jsis.2022.101717
7. Eric RavenCraft, 2022, What Is the Metaverse, exactly? WIRED, Culture, wired.com/story/what-is-the-metaverse
8. Tim Sweeney, “Foundational principles & technologies for the metaverse”, doi.org/10.1145/3306307.3339844, ISBN:9781450363174