



Guide to Metaverse Use-Cases (2023-3)

Metaverse - The Next Big Promise in the digital world



The world of the Metaverse jumped up a gear in the summer of 2021 when Facebook CEO Mark Zuckerberg announced plans to focus his company toward **building what he imagined would be the future of social, business, leisure, and culture: the Metaverse**. Zuckerberg later changed the name of his company from Facebook to Meta.

To define Metaverse, we must think of a **3D web powered by virtual reality (VR) and augmented reality (AR)**. The Metaverse is defined by its key characteristics:

- **Persistent** means it exists regardless of the user's physical presence.
- **Infinite** supports countless contemporary users and VR worlds.
- **Self-sustaining** means that users can earn within the Metaverse and pay for their utility.
- **Interoperability** helps users move their virtual items, including avatars, from one Metaverse project to another.
- **Real-time** allows users to relish live experiences.

What is Metaverse?

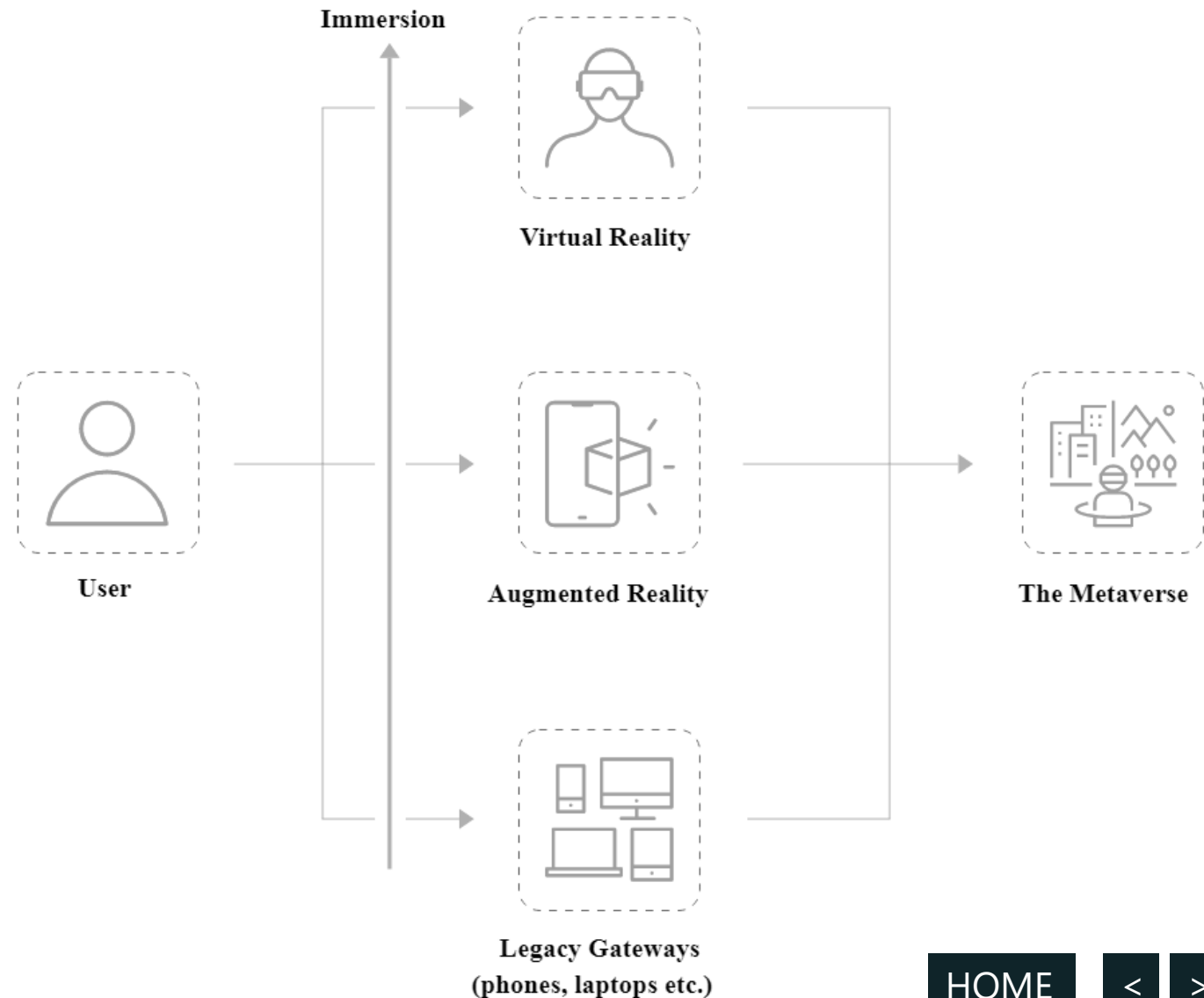
Metaverse is a parallel 3D virtual world

- Where each human being gets to own an avatar as an identity.
- These animated avatars would be capable of virtually doing all sorts of real-world activities in virtual worlds, from shopping to gaming to traveling to owning and selling real estate.

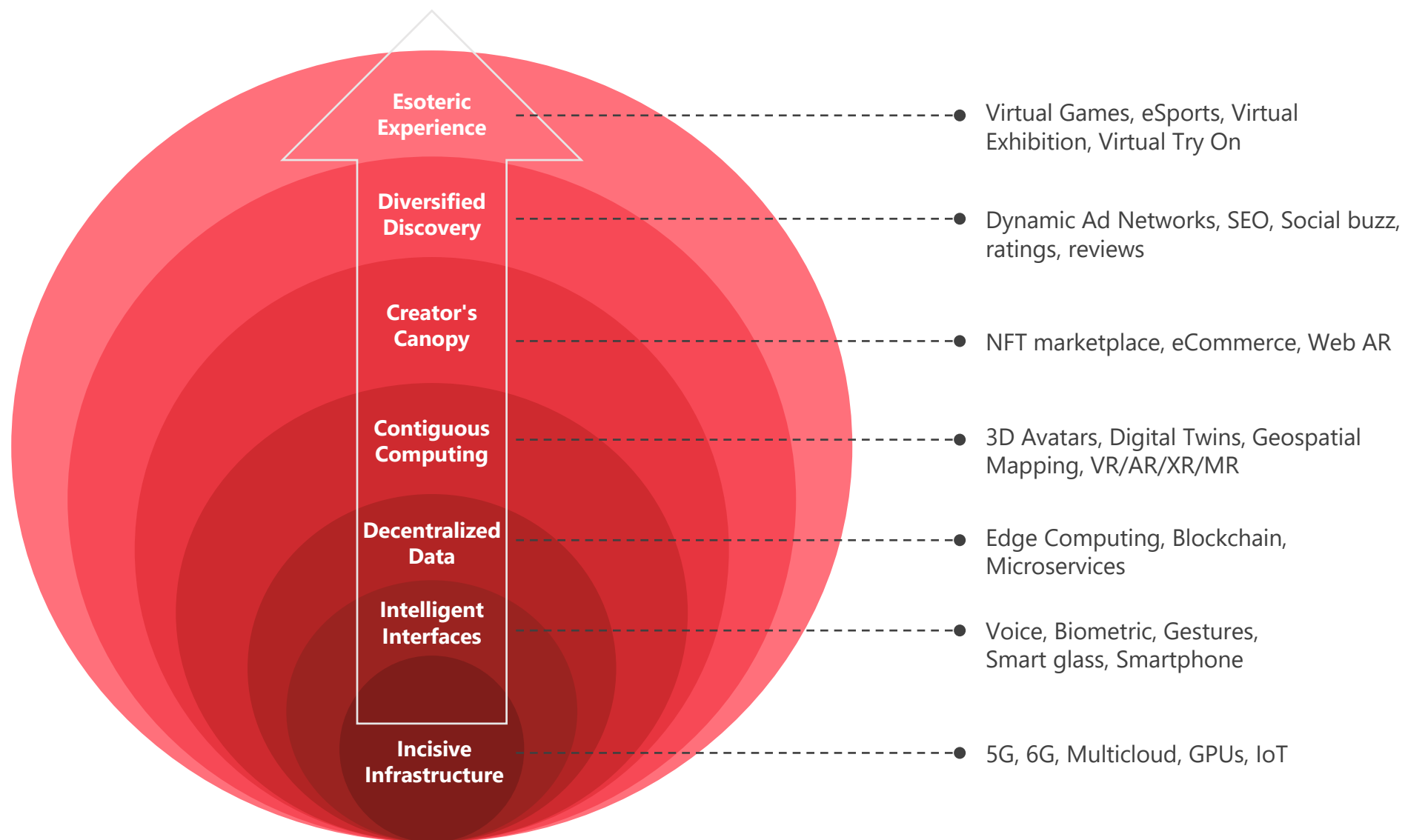
A VR headset is all you need to augment the real-world things around you virtually.

Although the Metaverse is not real, it feels immersive, and close to reality.

With technological advancement, the Metaverse may get even more exciting and real, and users will soon touch and feel virtual objects through haptic gloves.



Metaverse brings together the experience economy



Metaverse : Market Size Estimates

While majority around the globe are still coming to terms with Metaverse and all that it encapsulates, early investments by pioneers like Meta (the company), Fortnite (the game), Somnium Space (a VR world builder), IMVU (an avatar-based 3D social network) and many others have swollen the **Metaverse market size to about \$47bn**.

Around \$10bn out of this committed by Meta itself. Indeed, the **predicted market size of around \$800bn by 2024**—a 16 times growth rate within the next 2-3 years.

The **AR market**, in keeping with the larger Metaverse phenomenon, is expanding at a rapid rate and is poised to **touch \$88.4bn by 2026 from \$14.7bn in 2020**.

The global **virtual reality headsets market** size is projected to reach **USD19. 8 Billion by 2026, from USD 6.8 Billion in 2020**, at a CAGR of 19.5%.

The global **artificial intelligence market** size was valued at **USD 51.08 Billion in 2020 and is projected to reach USD 641.30 Billion by 2028**, growing at a CAGR of 36.1%.

The global **non-fungible token (NFT) market** size reached **USD 340.0 Million in 2020** and is expected to register a rapid revenue CAGR in the forthcoming years.

The **blockchain market** size is projected to grow from **USD 4.9 billion in 2021 to USD 67.4 billion by 2026**.

3D mapping and modeling market size was valued **at USD 3.64 Billion in 2020 and is projected to reach USD 13.15 Billion by 2028**.

With more than 2.7 billion gamers around the world and around 48% of gaming companies working on AR/VR games, the estimated size of the **gaming industry** is in the range of **\$200bn globally and is poised to reach \$545.88 by 2028** with a CAGR of 13.2%.

Early Adopters of the Metaverse

Nike (Retail) Nikeland



Nike is collaborating with Roblox to build its virtual world named "Nikeland" where players can try new sports shoes. The virtual channel will extend to experiences like virtual marathons.

<https://www.cnn.com/2021/11/18/nike-teams-up-with-roblox-to-create-a-virtual-world-called-nikeland-.html>

Maserati and Tesla (Automotive)



Virtual vehicles

Luxury auto brands like Maserati and Tesla are releasing virtual versions of their vehicles for avatars.

Walt Disney (Entertainment) Virtual Theme Park



With the help of AI, robotics and other tech advancements, Park-goers will purchase tickets to experience the theme park in the metaverse

<https://www.businessinsider.in/tech/news/disney-patents-metaverse-technology-for-theme-parks-that-would-track-visitors-while-projecting-personalized-3d-images-for-them/articleshow/88796166.cms>



Ralph Lauren, American Eagle, Gucci and North Face (Retail)

GUCCI



AMERICAN EAGLE
OUTFITTERS



Direct-to-Avatar (D2A) business

Direct-to-Avatar (D2A) business is where accessories and apparel are sold for the avatars.



Nvidia (Technology) Nvidia Omniverse

To combine different virtual worlds and integrate them by creating virtual twins of factories and buildings.

<https://techcrunch.com/2022/01/04/nvidia-expands-its-omniverse/>

<https://venturebeat.com/2021/11/16/bmw-uses-nvidias-omniverse-to-build-state-of-the-art-factories/>

The tech industry and the Metaverse

The tech industry is already ramping up its capabilities to meet demand for Metaverse applications

Big technology players like **Meta, Google, Microsoft, etc.** investing, ideating, exploring **the future of the 3D virtual world** in this “parallel” verse.

Many SI companies have started visualizing “**Metaverse as a Service**” as a service offering by bringing together the myriad **building blocks of AR, VR, AI, blockchain, NFTs, 3D, and gaming together.**

This is a fast-growing space, and it is imperative that the IT industry watches this space closely, **stitches in the right partnerships, conducts a few rapid POCs and MVPs, and then rolls out a full-fledged Metaverse as a Service (MaaS) proposition.**

It may not be long when **requests for responses are solicited as NFTs** and due diligence are conducted through virtual networks.

The promise is immense, and it will be important for **all the stakeholders to come together to identify valuable use cases and leverage the opportunities** in Metaverse.

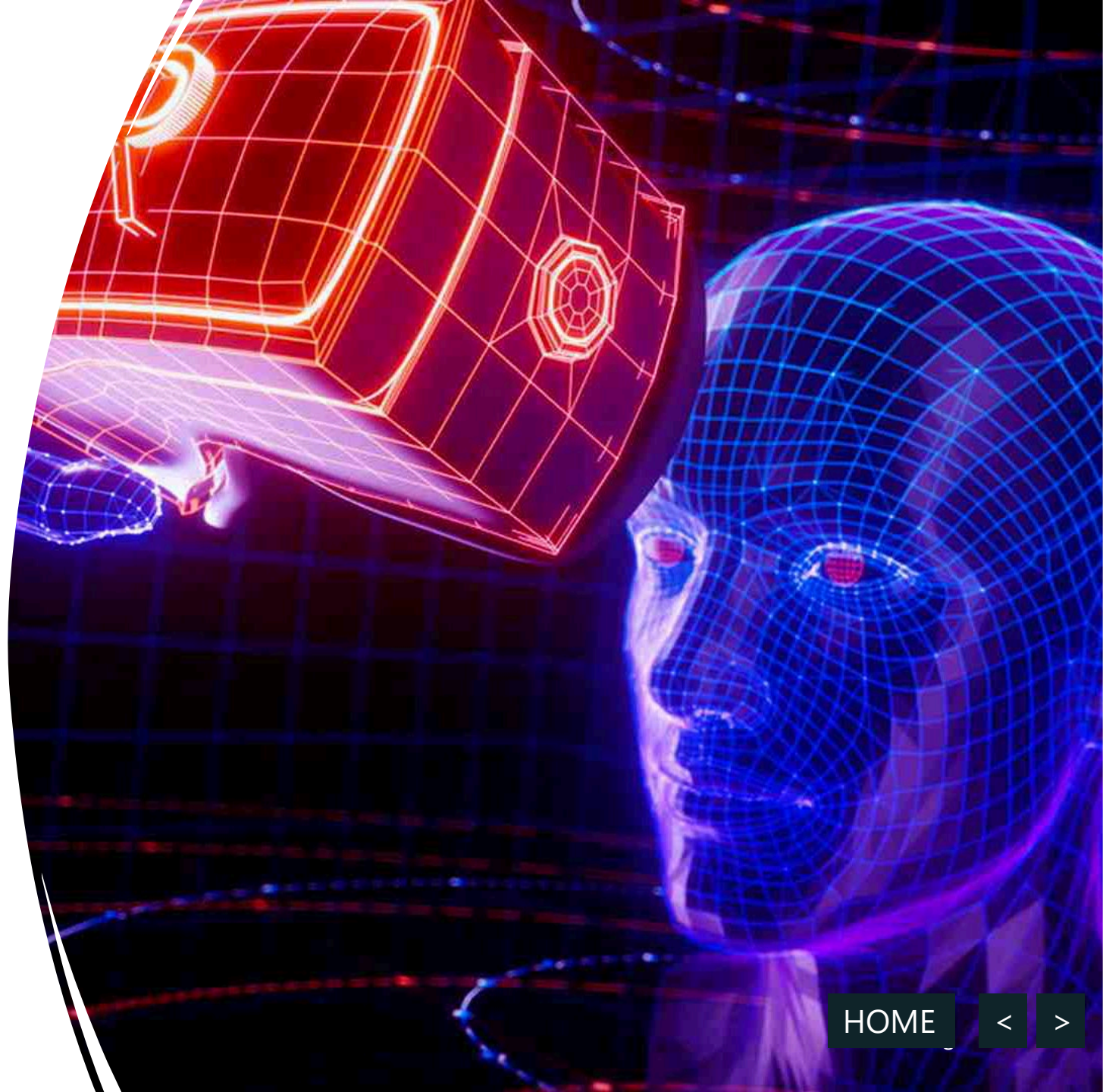
Bringing the Metaverse with a real-world example

It's a Sunday afternoon and after an early lunch, Mike, a Gen Z video game lover, was "deeply immersed" within a VR kit, making his digital avatar win his favorite video game on Nintendo Switch. While he plays the survival game, many "in-game" billboards with ads for pizza, warm beverages, and "take a break" catch his attention.

As digestive enzymes trigger his hunger, Mike goads his father into buying pizzas, who does so, not physically but by scanning through one of the "in-game" billboards with his smartphone while the payment is done from the bitcoin balance Mike had earned by playing the game. With orders placed, a happy Mike continues playing while the pizza is on his way home.

Having gorged on his pizza after some time, Mike, an efficient guitar player with an active account on SoundCloud virtual, gets down to compose something new, and once done, he simply uploads the recorded piece onto Soundcloud Virtual as an NFT.

Mike and his friends keep trading their NFTs between them, like a mutual appreciation club transferring bitcoins with glee and feeling appreciated for their compositions, the very bitcoins that they earn playing video games.



Metaverse : Building Blocks

Augmented Reality

AR will play an active part in **differentiating brands, low-cost visualization of costly assets**, enabling virtual try-on (of make-up, shoes, jewelry, etc.), for immersive gamified experience, enriched quality assurance, etc.

Virtual Reality

Use cases of virtual reality applications saw a quantum growth like **virtual conferences, virtual games, virtual exhibitions, virtual events, virtual training, virtual computer vision, and interactive virtual tours** seeing widespread traction.

Artificial Intelligence

From AIOps at an infrastructural plane, enabling **blockchain-driven smart contracts to power data-driven immersive experiences across various digital interfaces, to hyper-personalizing experiences** at the top, AI is a vital cog in the wheel of the Metaverse.

Non-Fungible Tokens

NFTs are tokens used to represent ownership of unique items. **NFTs allow creators to tokenize things like art, collectibles, even real estate. NFTs can be bought by users directly from the creators.** For every such NFT sold, creators can earn without depending on any intermediary.

Game design & development

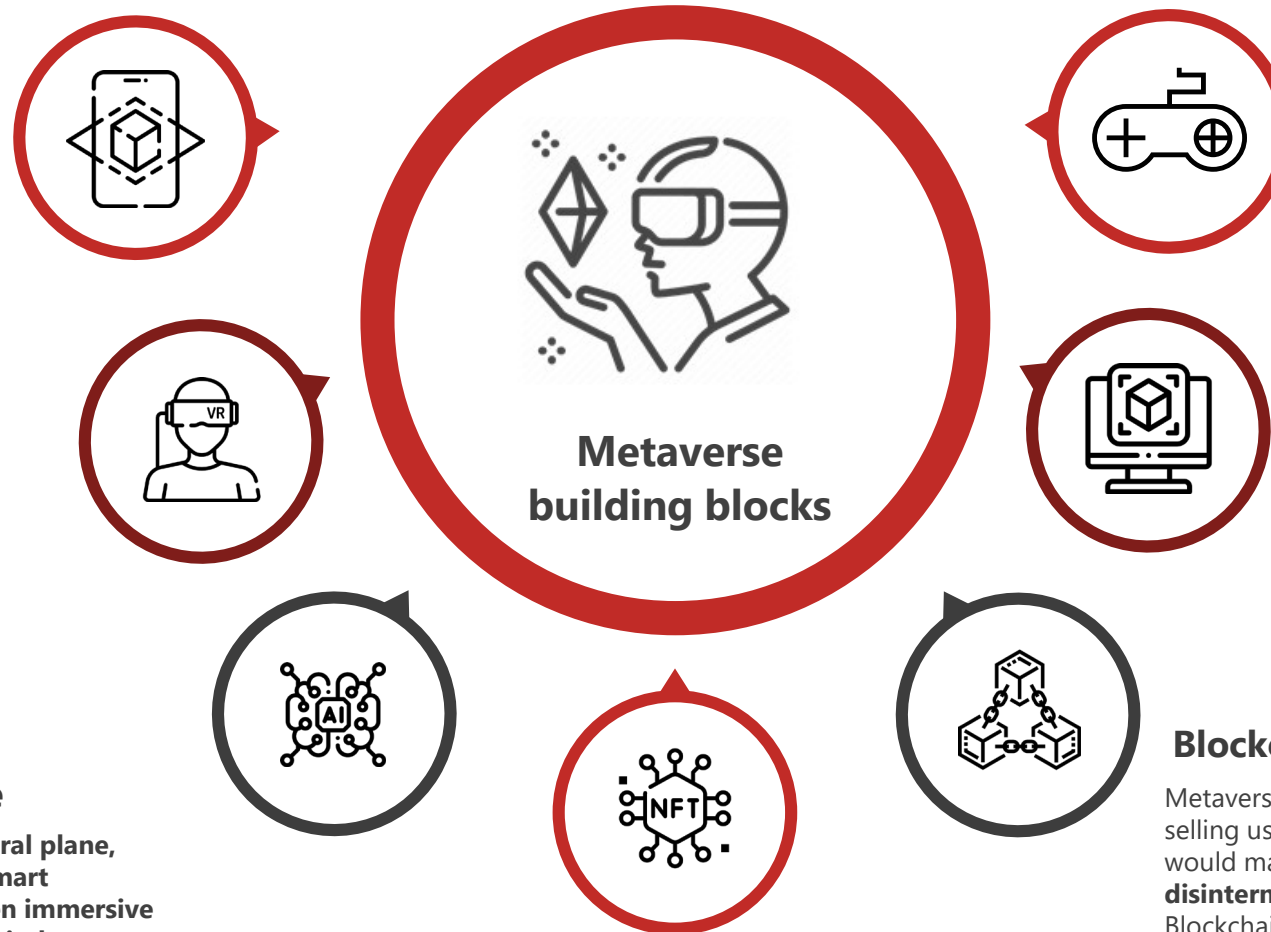
The creation of immersive 3D animated computer games, the origin of the Metaverse.

3D Modelling

With **avatars set to represent each human entity on the Metaverse, and virtual exhibitions, virtual events, and shows** becoming prominent uses cases in the Metaverse, the demand for 3D artists is growing like never before across industries, such as **animation, film, gaming, architecture, and interior designing**

Blockchain

Metaverse will certainly allow for buying and selling using real currencies, Blockchain would make the **experience much more disintermediated, seamless, and secure.** Blockchain will also form the basis of Decentralized Apps (DApps) and Decentralized Autonomous Organizations (DAO).



Metaverse Applications / Use Cases

Augmented Reality

- Web AR services
- Development on Vossle and 8th Wall
- Virtual try on
 - Jewelry
 - Shoe
 - Furniture



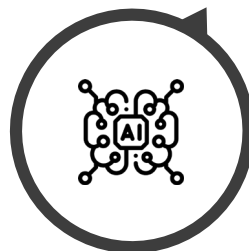
Virtual Reality

- VR design & app development
- Virtual retail services
- Virtual exhibition services
- Virtual conference
- Virtual interactive tour
- 3D VR games
- Virtual showrooms
- Virtual training



Artificial Intelligence

- AIOps
- Intelligent User Interfaces (UI)
- Enriched smart contracts
- AI for immersive experiences
- AI as an authoring tool
- Hyper personal and hyper contextual experiences

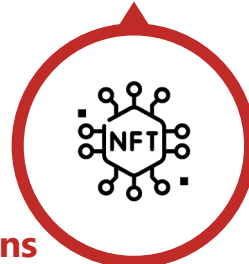


Non-Fungible Tokens

- NFT marketplace design development
- NFT development
- Intellectual property tokenization
- Marketplace support & maintenance
- Smart contracts audit

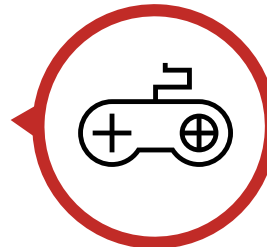


**Metaverse
building blocks**



Game design & development

- Game design & development
 - Mobile game
 - Fantasy game
 - AR/VR game
- Multiplayer and single player games
- Mobile gaming app integration with social media, payment APIs, etc.
- UI/UX with best-in-class graphics



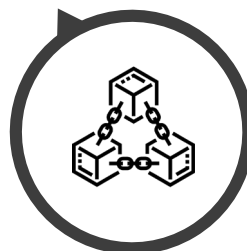
3D Modelling

- 360-degree 3D Experience Creation and Design (Avatars)
- 360-degree VR Metaverse Animation
- Virtual Reality 3D Model Creation
- High resolution imagery with lower latency



Blockchain

- Blockchain design, development & support
- MVP & POC development
- DApps development
- Smart contracts development
- Custom blockchain app development
- Tokenization
- Decentralized exchange





About Us

USTECH SOLUTIONS offers end-to-end Metaverse development services for diverse industry niches. We understand the Metaverse and supporting technologies like blockchain, NFTs, cryptos, VR and AR tools, 3-D technology, and more required to develop futuristic projects.

We support the development of projects spanning gaming, social media, trading, and NFT marketplaces. Our team also customizes the project as per your project-specific needs. Our Metaverse services include the following.

- Advisory and Consulting
- Decentralized platform development
- Metaverse marketplace development
- Non-fungible development and integration
- 3-D space development
- Metaverse app development

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