

The **metaverse**: a metaphysical universe in emergence





Deciphering the metaverse

The metaverse emerges from the convergence of physical and digital realities. It is a combinatorial innovation that requires multiple technologies – AR, VR, MR, HMDs, IoT, AI, cloud, 5G and spatial technologies – to function in synchrony. Being device-agnostic and persistent, the metaverse provides enhanced immersive experiences and supports an independent virtual economy based on non-fungible tokens (NFT) and cryptocurrencies. Currently, it is found in the form of disparate, somewhat-immersive XR environments where humans and machine-generated entities interact.

A good analogy of the metaverse is the internet, which started as separate, independent online destinations and bulletin boards. The destinations eventually became sites on a virtual, shared environment that came to be called as the internet – similar to how the metaverse is evolving too. Estimated to be worth \$800 billion by 2030, the metaverse is being characterized as the next megatrend in the world of technology. It is at a point where the enterprise architecture and innovation leaders are stepping up to recognize its potential, explore the opportunities and adopt the ecosystem.

There is no universally agreed-upon definition of the metaverse yet even though the term was first coined way back in 1992. However, beyond all hype, the metaverse is imminent and potentially revolutionary and will entail both opportunities and risks like any technological disruption does. In what form will it manifest eventually is yet to be seen. However, what's evident is that its impact will be comparable to that of the internet.



The metaverse can be thought of as a combination of technologies that creates a persistent blend of the real and the virtual worlds, giving us the freedom to move seamlessly from one to another. The metaverse is not limited to increasing the use of augmented reality (AR), virtual reality (VR) and mixed reality (MR). It is not just about developing flashy holographic representations. It is not just about putting brands and processes, employees and customers, into a virtual gaming environment. JJ

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Potential and predictions

There's much hype surrounding the metaverse and rightly so. Driven mainly by technology companies' enthusiasm for it, disparate metaverse ecosystems are sprouting across domains. As the technology will mature, it will serve as a unified, virtually real environment for all activities that currently take place in siloed ecosystems:



The decentralized, collaborative, interoperable and persistent environment of the metaverse will facilitate models and opportunities for expanding digital business. Even though it is in its infancy and its adoption is fragmented, there are already metaverse products and standalone use cases galore to explore opportunities across industries:

01

Academic, education and professional training will become more immersive without investing time and energy in building physical infrastructure for it

02

Virtual events, which have gained popularity in the last couple of years, will offer more integrated experience

03

Retailers will offer immersive shopping to provide an in-store-like shopping experience without shoppers' physical presence

04

Enterprises will facilitate achieve better communication and collaboration among their employees through augmented, virtual workspaces

05

Social media will move to the metaverse, where three-dimensional avatars of users will have real-life like interactions instead of sharing texts, photos, videos or audio



Our take on the metaverse

Since the metaverse is in its nascent phase, ascertaining viable avenues for investment is difficult, to say the least. Besides, another challenge is to ensure that the metaverse remains an inclusive space for creators, providers and consumers alike. The accessibility and the inclusivity of the metaverse economy should be indiscriminate to all rather than exclusive to a few. This is crucial for democratizing the opportunities that this imminent technological disruption entails. At HCLTech, we have always worked towards making technology simpler and more accessible to a larger section of the population. And, we're doing the same with and for the metaverse. MetaLabs by HCLTech is our initiative to experiment with the technology and come up with turnkey use cases, facilitate a platform for skill development for existing and emerging talent pools and provide an arena for business innovations.

Our initiatives for the metaverse

MetaLabs by HCLTech

HCLTech MetaLabs is our strategic BU formed to incubate and ideate on establishing the enterprise metaverse experiences encompassing frameworks. MetaLabs by HCLTech is an "always on" environment with 40+ HCLTech industry creator zones in the VR domain and 600+ Ideapreneurs. Continuing our exploration journey, we shall leverage a diverse set of cloud-native solutions along with IoT and various other adjacent technologies to construct metaverse interfaces. We have started working with our strategic partners and our open innovation (OI) ecosystem, which comprises innovative startup solutions, to achieve this objective. Our expansive global reach to various startup ecosystems strengthens our core offering even further and opens up multiple doors to evaluate and onboard breakthrough ideas. So far, we have evaluated and connected with more than 300 unique startup creator partners that offer metaverse-centric solutions. Besides, our strategic ecosystem partnerships also extend to industry fora like WEF, where we collaborate with others to work on technologies of the future.

MetaLabs was present at Davos, WEF 2022, where we showcased what are we developing and building inside our metaverse zones. Stakeholders from our various teams joined in their virtual avatars from different parts of the world to demonstrate the capability of MetaLabs by HCLTech. The demonstration was conducted for several WEF council members, clients and media representatives who visited our booth.



Kick-starting the metaverse journey for customers

MetaLabs by HCLTech will help customers create their evolved immersive digital environments to start their metaverse journeys via a unique approach. Customers get access to a pre-existing repository of more than 40 industry use cases. For example – in the workspace collaboration use case, customers get a base experience zone, where key stakeholders can go through how one can operate, conduct meetings, host clients, run ideation workshops and more within the metaverse. This gives them a hands-on experience with this novice and emerging technology. Once satisfied, customers can incorporate the use case in their own sandbox environment in a turnkey manner.

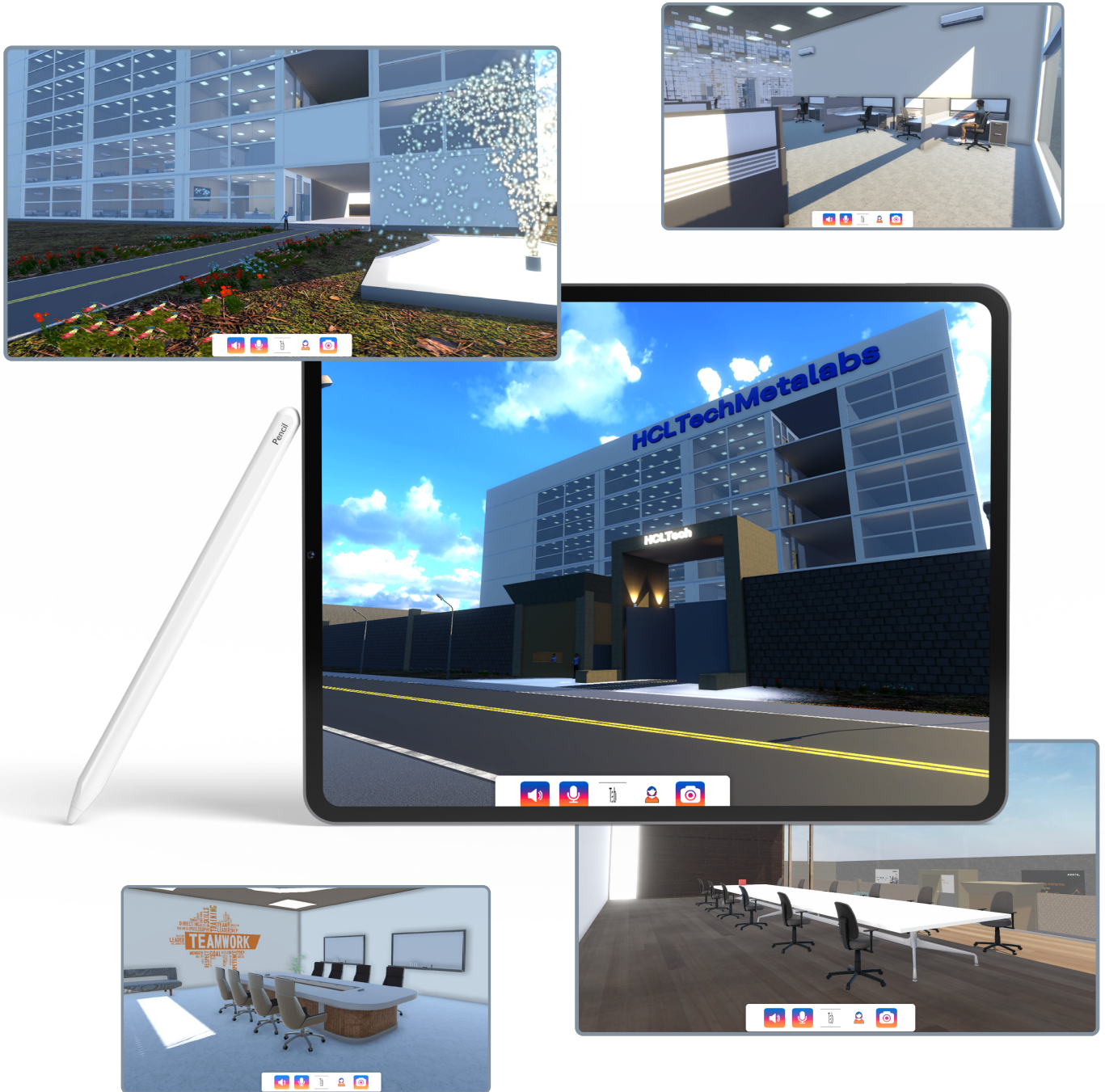


Figure 1: Sneak peek into MetaLabs by HCLTech, showcasing the workspace collaboration use case where colleagues can meet each other while sitting in different locations across the globe. People can host meetings, conduct workshops, brainstorm in RFI/RFP war zones or simply can relax and catch up with each other in a recreational zone.

MetaChamps: Championing the metaverse

MetaChamps is a periodic , crowd-sourced, open innovation campaign where individuals collaborate with radical ideas and potential solutions. It is organized by the Office of CTO , HCLTech and launched both externally and internally. MetaChamps 2022 garnered more than 600 registrations. Going forward, it will thus create a niche pool of metaverse-centric talent from across industries, collaboratively developing solutions for both HCLTech and the external ecosystem. Internally, MetaChamps saw participation from multiple HCLTech teams – ERS, Digital Business Unit and Hybrid Cloud, to name a few.

More than 95% of individuals who showed interest in the metaverse said that they were interested in exploring this technology solution for themselves and their clients but have no existing guidance or solution in place. This is where the entire MetaChamps initiative becomes relevant. It provides a platform to digital engineers to build and scale their solutions in their respective industries. On the other hand, for those who already had exact or related solutions, MetaChamps allows them to integrate their innovations with MetaLabs and offer joint solutions to our customers.

During this entire campaign, Media and Entertainment, BFSI, Retail, CPG, Life Sciences and Manufacturing industries found the most number of use cases and interest in the metaverse and its offerings. Some of the use cases identified through the MetaChamps program were:

- 01 Airplane design, planning and visualization
- 02 Advertising
- 03 Complex pre-surgery and post-surgery assessments
- 04 Setting up manufacturing centers and producing different commodities with less friction and smaller lead times
- 05 Forming community engagement platforms and social networks



Start-up Exploration Series: Metamorphosing Ideapreneurs

To continuously engage and explore our startup ecosystem, we conduct a monthly startup exploration series, wherein we invite startups for virtual sessions and showcase their solutions to our various teams. It stirs up strategic thinking and alternative perspectives among stakeholders from both industry and academia. This, in turn, fuels innovation and ensures proactive technological advancement.

Setting strategic priorities **right**



We believe that the metaverse will be a confluence of the next generation of cloud-native architecture and applications built on Web 3.0 and each of its use cases will be consumed as DaaS. That said, the debate on whether the metaverse will be centrally controlled or decentralized is an ongoing one. However, the entire motion is in favor of striking a balance between the two. Having too much control over it will strip the metaverse of its capability to support innovation. Secure digital access and ubiquitous connectivity are some of the initial charters that we should aspire for as strategic priorities.

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HCLTech is a global technology company, home to 211,000+ people across 52 countries, delivering industry-leading capabilities centered around Digital, Engineering and Cloud powered by a broad portfolio of technology services and software. The company generated consolidated revenues of \$11.79 billion over the 12 months ended June 30, 2022. To learn how we can supercharge progress for you, visit hcltech.com.

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