



Emerging Technology Insights

Web 3.0

Web 3.0 is a combination of the internet of things, artificial intelligence (AI), machine learning, data science, 5G and blockchain.

1. Coffee-giant Starbucks is planning to launch a Web 3.0-based loyalty programme, to attract and retain a younger demographic of customers. [Read more](#)
2. The Ministry of Economy, Trade and Industry (METI) of Japan plans to introduce its own 'Web 3.0 Policy Office' in the Minister's Secretariat. The University of Tokyo (Todai) has recently announced a range of study programmes that will take place in the metaverse. [Read more](#)

	The Sandbox: A non-fungible token (NFT) based metaverse world, emerging as a decentralised autonomous organisation	Zepeto: Platform to create avatars and interact in a virtual world	Somnium Space: Platform to create a personalised virtual space from the assets available	Decentraland: Open-source platform to design and import 3D models	Fortnite: A 3D game which allows you to collaborate to create your own world	Roblox: Gaming platform that allows users to create their own games in a 3D environment
Compatible devices	Web browser	Mobile	Virtual reality (VR), PC, mobile	Web browser, mobile	Mobile, PC, PlayStation, Xbox	Mobile, PC, TV
Currency	SAND	Zcoins and ZEMs	CUBE	MANA	V-Bucks	Robux
Total views	3.7 million ¹	610,000 ²	NA	1.1 million ³	73.1 million ⁴	333.9 million ⁵
Demographics	25–34 years is the largest age group of visitors	Almost 80% Asian teenagers	NA	25–34 years is the largest age group of visitors	Nearly 68% are 10–30 year olds ⁶	Mostly US-based population of 9–15 year olds

1 <https://www.similarweb.com/website/sandbox.game/>

2 <https://www.similarweb.com/website/zepeto.me/>

3 <https://www.similarweb.com/website/decentraland.org/>

4 <https://www.similarweb.com/website/fortnite.com/>

5 <https://www.similarweb.com/website/web.roblox.com/>

6 <https://gallantway.medium.com/with-over-200m-users-2bn-in-revenue-heres-why-fortnite-may-be-the-ultimate-growth-marketing-e278a3c684d#:~:text=Acquisition%3A%20Fortnite%20Acquires%20Users%20by%20Knowing%20Its%20Audience&text=According%20to%20the%20results%20of,of%20catering%20to%20that%20demographic.>

Metanomics

Metanomics refers to the creation of real and useful opportunities within the metaverse. With the rapid adoption of the metaverse, the demand for aiding software and hardware products has also increased. In 2021, the total number of augmented reality (AR) and VR headsets was 92.1% higher than that of the previous year.⁷ The metaverse market is currently valued at USD 250 billion and is expected to reach USD 450 billion⁸ by 2025. Therefore, it is expected that the demand for such products will eventually follow.

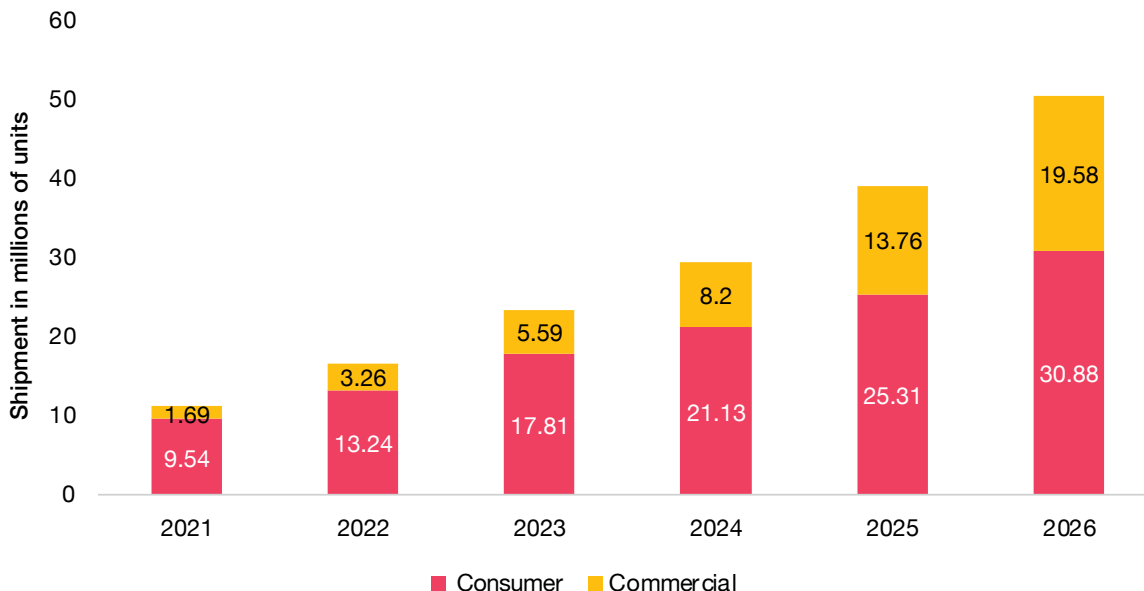
India

1. Bliv.Club and WIOM are looking forward to launching the first metaverse sports city, which will include collaborations with celebrity cricketers like Shikhar Dhawan to blend the metaverse reality with sports. [Read more](#)
2. AjnaLens, a Mumbai-based start-up, has launched haptic gloves that provide an immersive experience in the metaverse space. [Read more](#)

Global

1. The US military is building its own metaverse to get better assistance in training, treating veterans for chronic pain and tackling post-traumatic stress disorder. [Read more](#)
2. The metaverse real estate hype was made popular through the HSBC and JP Morgan deals announced in the last quarter. The momentum has continued with Decentraland (second-biggest player in the metaverse real estate industry after The Sandbox) announcing their largest-ever purchase of nearly USD 1 million. [Read more](#)
3. Decentraland also launched the world's first metaverse ATM on their platform to easily purchase any cryptocurrency chosen by a user. [Read more](#)
4. With the demarcations between the gaming and VR/AR industries becoming less distinct by the day, Meta's Quest 2 sales numbers show that customers are increasingly choosing to combine the two experiences. Quest 2, the standalone VR headset, is outpacing the Xbox Series, which has never happened before in the history of gaming. [Read more](#)

AR and VR headset shipments worldwide from 2021 to 2026 (in million units)



Source: Statista.com

⁷ <https://www.entrepreneur.com/article/431142>

⁸ Ibid.



NFTs and cryptocurrencies

NFTs are necessary to unlock the economic potential of the metaverse and encourage community building. This technology can have a huge impact on how various industries will grow with the help of cryptocurrencies as their means of exchange.

India

1. Artfi, an Indian NFT start-up, raised USD 3.26 million (approximately INR 26 crore). It is focused on democratising the fine arts space by fractionating high-value artworks into limited-edition NFTs. [Read more](#)

Global

1. Many green start-ups, which are devoted to protecting our planet from climate change, are using NFT money to clean ocean garbage. With the help of workshops and collaborations with incubators and universities, one such start-up is prioritising sustainability to raise USD 1.2 million to clean up oceans worldwide. [Read more](#)
2. The European Union requires cryptocurrency businesses to operate with a licence and mandate that stable coin issuers have reserves similar to those of banks. [Read more](#)

Quantum computing

With the comprehensive research in the field of quantum computing, the barriers of it recognising only a binary system have been broken.⁹ This will revolutionise computing power and enable the solving of problem statements involving a large number of variables.

India

1. The Indian Army is developing encryption-resistant methods as counter measures against quantum computing attacks. [Read more](#)
2. BosonQ Psi, a quantum computing-based enterprise and a software as a service (SaaS) company, is on a mission to develop the world's first quantum-powered engineering simulation software. [Read more](#)

Global

1. Anti-butterfly effect has enabled new benchmarking of quantum computing performance. [Read more](#)
2. Pandemic Sciences Institute, University of Oxford, is planning to tackle antibiotic resistance with AI and quantum computing. [Read more](#)

⁹ <https://www.cbinsights.com/research/quantum-computing-industries-disrupted/>



5G

The adoption of 5G technology is able to provide ten times faster speeds than the current 4G LTE. It has a massive capacity to connect multiple devices and provides ultra-low latency to help the smooth functioning of various technologies in the virtual space. With its ultra-wideband, it is able to connect several workspaces with a small number of routers.

India

1. The Indian Army is developing a 5G network infrastructure to enhance communications and address the need for high-speed data. [Read more](#)
2. 5G services across the globe are expected to reach USD 700 billion by 2027. [Read more](#)
3. India accounts for 15% of the worldwide market, making it a top-three contender. [Read more](#)

Global

1. China spends CNY 200 billion to test the power of 5G, makes significant progress in smart cities, industrial internet and smart villages. [Read more](#)
2. A satellite-based 5G network is being tested by Ericsson in partnership with Qualcomm and Thales. [Read more](#)

Edge computing

Edge computing focusses on handling real-time data processing and provides cloud resources for creating, improving and securing data. It is based on the concept of decentralised real-time data.

India

1. GE healthcare to launch a new 5G innovation lab in India. [Read more](#)
2. 75% of all data generated online will be collected and analysed on edge by the end of 2025. [Read more](#)

Global

1. The global edge computing market size is expected to reach USD 116.5 billion by 2030 and grow at a CAGR of 12.46% from 2022 to 2030. [Read more](#)
2. Scale computing helps enterprises to enhance resiliency and increase productivity, and aids companies to manage their edge infrastructure. [Read more](#)

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