

• December 2023

Decoding **Metaverse:** Beyond Perception to Future Potential

• Whitepaper | [TMT Practice](#)

Metaverse – Introduction and its business potential

The metaverse is a game-changing concept that has been disrupting traditional business models and creating new growth opportunities. It is one of the most important present-day phenomena that businesses cannot afford to ignore.

Metaverse The next iteration of the internet that combines the physical and digital worlds by encompassing a range of technologies, such as Web3, extended reality (XR), blockchain, crypto, digital twin, non-fungible tokens (NFTs) and artificial intelligence (AI).



Estimates put the future of the metaverse addressable market at **a few hundred billion to trillions of dollars**. The metaverse is expected to create significant value for customers, businesses and economies.



75% of investors plan to **maintain or increase investment** in the metaverse over the next five years.



89% of executives feel that the metaverse will play an important role in their **organisations' growth journey**.

The number of **cryptocurrencies** has grown exponentially from 7 in 2013 to **11k+** by Nov 2023.

By 2030, the number of **metaverse users** is expected to reach **~5 billion**.

In the next five years, US **consumers** expect to spend **~4 hours** per day in the metaverse.

The metaverse presents both threats and opportunities, mostly large-scale, for businesses.

Threats

Significantly disruptive business models

Changing consumer behaviour

Technological disruptions

Increased competition from non-traditional competitors

Fragmented standards

Regulatory and compliance challenges

Evolving security landscape

Ethical considerations

Opportunities

Enhanced customer engagement

Quicker time to market

Personalised experiences enabled

Innovative business models

New markets and offerings

Creation tools

Cost optimisation

Safer workplaces

Efficient processes

Data-driven insights

Prototyping, R&D, and testing

Training and onboarding

The metaverse presents a significant untapped revenue stream, transforming the way we shop, interact, engage socially, discover products, play games and collaborate. It has great potential for learning and development, making it a compelling use case in various industries. – Vice President and Practice Head, an IT Service Company

1. The journey so far



"By 2030, the value of the Metaverse could reach ~\$900 billion"

– Bain & Company, Aug 2023



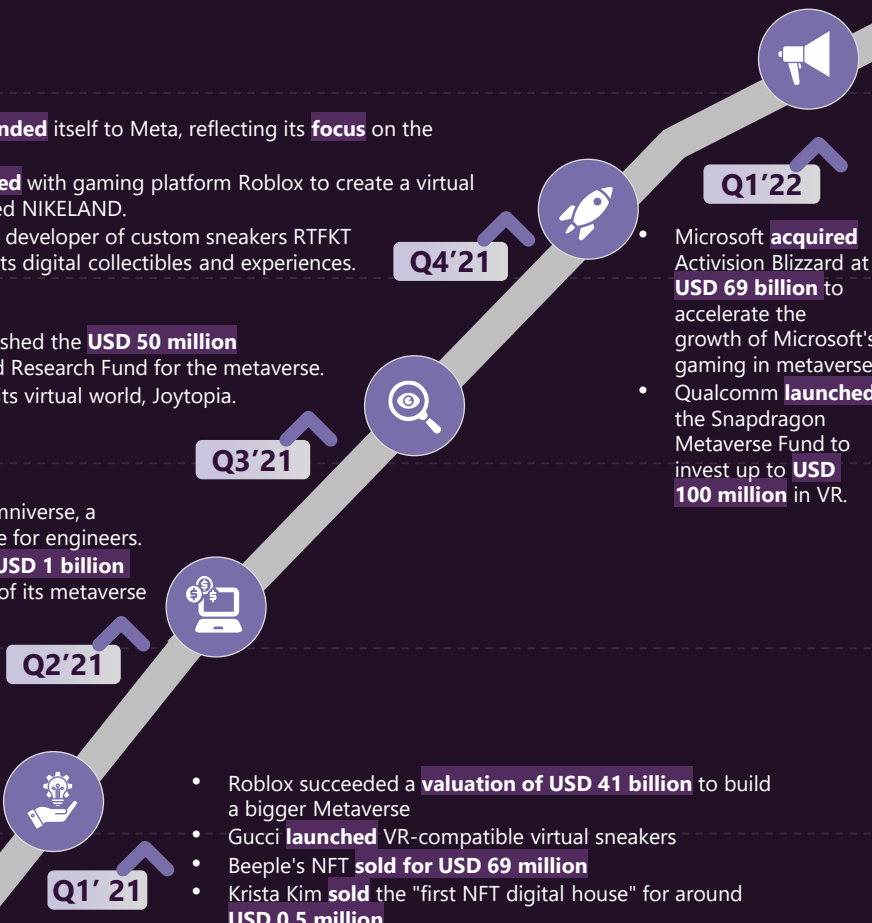
Growing influence until last year

The perceived impact of the metaverse grew until 2022, fuelled by investments, M&A and its adoption across industries

Historic phase

Current phase

The foundations of the Metaverse have been built over more than two decades through the development of early virtual worlds that utilised social communities, simulations, and games



Highlights of phase

Growth so far

Innovation enabled never-before experiences
 Innovation and substantial funding propelled the development of immersive and collaborative experiences in the metaverse.

Industry-wide uptake driven by FOMO*
 Companies across industries actively entered the metaverse, to leverage the 'wave' of virtual worlds, virtual assets, NFTs and AR.

* Fear Of Missing Out

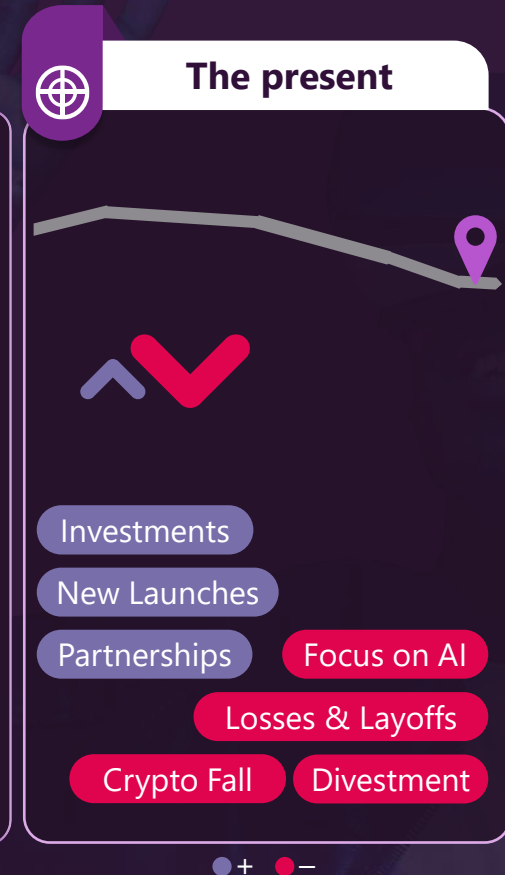
Aggressive investments
 Some prominent players invested significant amounts and made announcements in anticipation of quicker ROI.

2. The present



"...there's a lot more scepticism about what role it's (metaverse) going to play, particularly in the consumer domain, beyond the obvious areas of things like gaming."

– Ben Wood, CCS Insight, Mar 2023



Recent developments impact sentiment on metaverse

Mixed business experiences in recent quarters have led to deprioritized the metaverse in some cases, raising doubts about its growth potential.

Historic phase

Highlights of phase

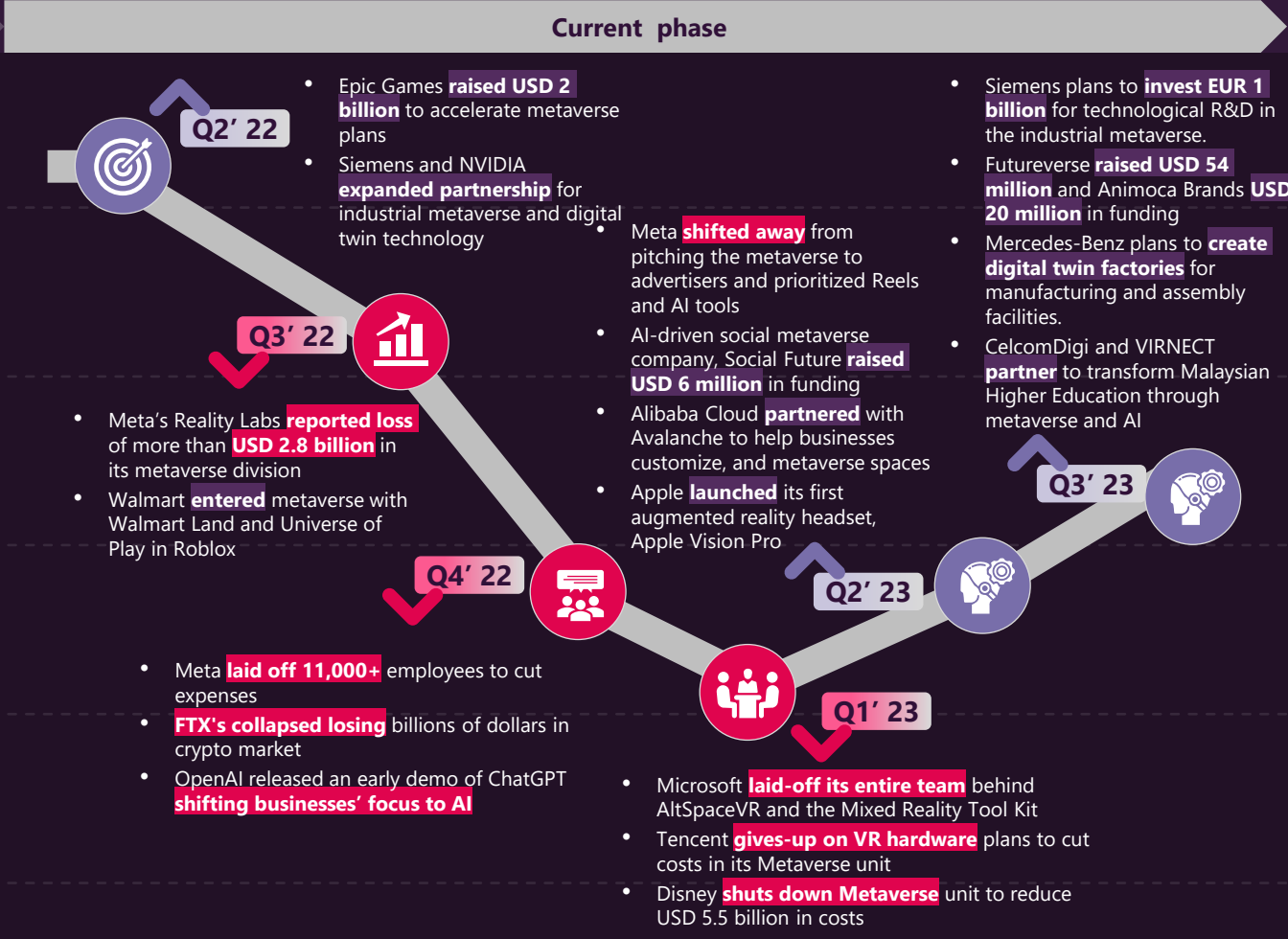
Negative sentiments and doubts

Prioritizing cost optimization
Companies realigned resources, downsized teams, and adjusted metaverse-related strategies

Shifting investment focus
Players scaled back metaverse initiatives and prioritised quicker ROI from generative AI.

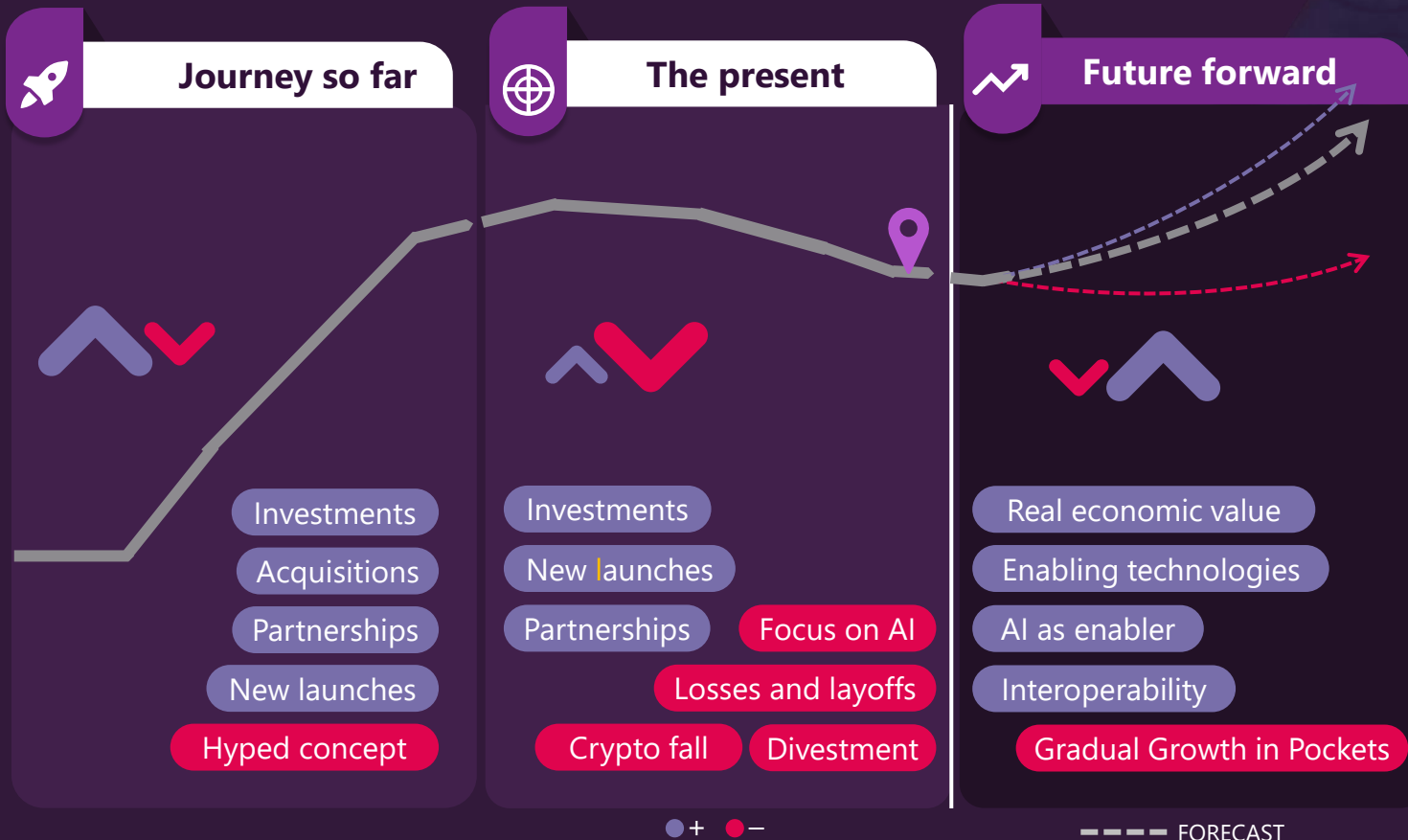
Industry setbacks and crypto concerns
The collapse of a major crypto exchange affected investor confidence and crypto adoption impacting the growth of metaverse.

Current phase



Typical progression of emerging technologies

The sentiment curve for metaverse



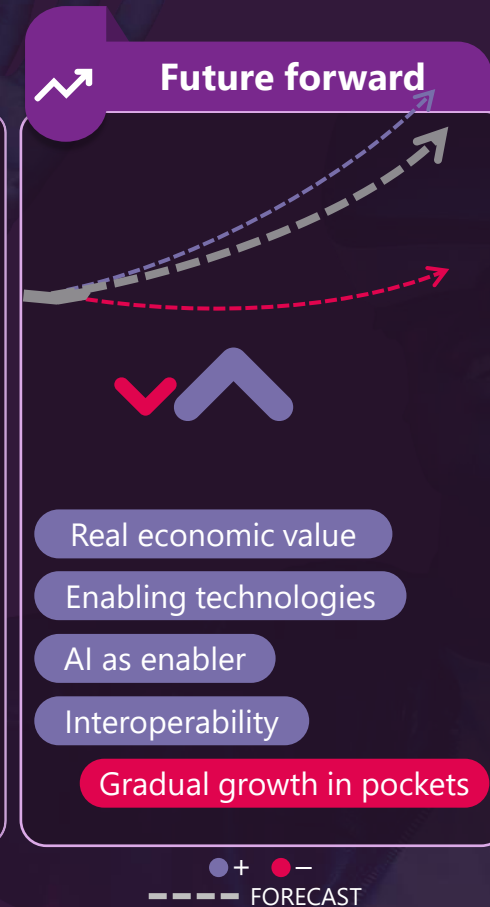
Future forward: A journey of remarkable evolution from past to present

Providing a glimpse into a promising future for the metaverse, supported by the right fundamentals and robust drivers.

3. Future forward

"I remember in the early 2000s, even some big brands said they didn't need a social media presence, and now every business – big and small – is on social media. I truly believe the same is going to happen with the metaverse. That, if nothing else, is why everyone should care about the metaverse."

– Bernard Marr / Forbes, Aug 2023



Growth pillars – **Unleashing potential of metaverse**



Metaverse offers **some 'real' and irrefutable value** for businesses and experiences for customers

Doubts about the potential of the metaverse have had little impact on sentiments surrounding its validity as an **enabling technology**, which continues to grow steadily



AI, initially a distraction for the growth of the metaverse, will eventually become a **strong enabler** that will help unleash the true potential of the metaverse.

Collaborative and industry-wide efforts driving the development of **interoperability and standards**, overcoming key roadblocks to unleash the growth potential of the metaverse.



Metaverse benefits for business – ‘Real’ Commercial Value

Commercial value of metaverse



Businesses have already started leveraging the benefits of the metaverse and related enabling technologies. Strong economic impact on performance is possibly the biggest motivator for its uptake among businesses.



Cost optimisation and efficiency



Boeing plans to build a plane in the metaverse. It will use virtual replicas for simulations and problem-solving to **lower production time**.



BMW has collaborated with NVIDIA to create a digital factory. The factory uses digital twin to **boost planning efficiency by 30%**.



John Deere plans to create a virtual twin operations centre for **remote management** of over 60 facilities globally.

Quicker time to market



Samsung Universe allows users to learn about its releases and technologies, thereby enabling **faster product launches**.



Siemens digital factory transformation helped **reduce time to market by 200%** while improving productivity by 20%.



Nestlé utilises VR to swiftly **test virtual prototypes** in the metaverse, thereby enhancing product development.

Safer environments



BP utilises VR-based training to **replicate critical conditions in drilling zones** to enable effective learning.



Equinor employs 3D modelling and simulation to **observe and analyse offshore assets** and operations.



Shell employs VR to **enhance safety awareness** among frontline workers.

Enhanced customer experience and engagement



Mercedes-Benz uses VR showrooms and AR apps for **interactive vehicle presentations**.



Avaya enables seamless communication with contact centres **across virtual and traditional channels** using the metaverse.



Aditya Birla Capital's **OneVerse Virtual Lounge** offers financial solutions in the metaverse.

Optimised operations



GM uses VR and human simulation for **efficient automotive design**-related collaboration.



Pfizer has enhanced its USD450 million factory's **supply chain** using VR and digital twin technology.



Accenture uses the metaverse for remote **employee onboarding** and training.

Innovative business models and opportunities



Shanghai's **metaverse tourism** plan focusses on digital infrastructure, technology breakthroughs, new scenarios, art platforms and interactive content.



Shell utilises Web3 and blockchain for **sustainable energy and transparent carbon credit tracking**.



Nike's NIKELAND sold 600 **NFT sneakers for avatars** for USD 3.1 million within six minutes of launch.

Metaverse offers some ‘real’ and irrefutable value for businesses and experiences for customers

Enabling technologies: **An ever-growing ecosystem**



Enabling technologies



The growth of the metaverse is driven by the simultaneous expansion of various enabling technologies, which foster substantial adoption and uptake across diverse industries, across its architectural layers.

AR / VR

- AR / VR shipments are projected to reach 43.87 million by 2025, compared with 14.94 million in 2022, at a rapid **CAGR of approximately 43.2%**.
- **Planned product launches** by Meta's Quest 3, Apple's Vision Pro and Samsung's XR headsets.

Blockchain

- Blockchain is expected to have a 10% impact on **global GDP** by 2027.
- The market is forecast to grow from USD 18.42 billion in 2023 to **USD 508.1 billion in 2030**, at a **CAGR of 62.4%**, driven by factors such as cryptocurrency adoption and retail acceptance.

5G

- More than 500 **5G operators** are investing in 5G across 162 countries ; 115 operators have invested in public 5G standalone networks. Companies like Qualcomm, Microsoft, Verizon, Meta, M1, Gardens by the Bay and ESPL are active in 5G-enabled virtual opportunities.

Cryptocurrency

- There are more than **11,000 cryptocurrencies**, with a total **market capitalisation of USD1.4 trillion**.
- Total number of users utilizing cryptocurrencies may **reach 1 billion by 2030** if the trendline continues.

IoT

- In 2023, global IoT connections are projected to increase by 16% to 16.7 billion, compared with 2022; **by 2030, there could be over 29 billion** IoT connections.
- Funding for early-stage IoT start-ups grew to a **record USD 2.45 billion** in 2022.

Spatial computing

- The global market for spatial computing is projected to be valued at **USD 620.2 billion by 2032**, indicating substantial growth and rising demand for this technology in segments such as architecture, collaboration and remote work.

Digital twin

- The digital twin market is set to achieve a **USD 110.1 billion valuation by 2028**, at 61.3% CAGR from 2023 to 2028, propelled by simulations, cloud platforms and integrated technologies that support the growth of industrial metaverse.

Doubts about the potential of metaverse have had little impact on sentiments surrounding its enabling technologies, which continue to grow steadily.



As the hype settles, it allows for a more realistic and balanced approach ensuring that the Metaverse is built on a solid foundation. We are on a multiyear journey that will lead to technological progress and widespread adoption of the metaverse. But it is already available today!

CEO, Headset And Technology Manufacturers

We are at a crossroads of digital transformation as new technology and existing industrial applications converge. Metaverse-enabled technology presents an opportunity for manufacturers to address these challenges through immersive experiences and advanced analytics to drive innovation.

Founder, Vice President And Executive Director Of The Manufacturing Leadership Council

The catalyst: AI to turbo-charge metaverse capability



AI, initially a distraction for the growth of the metaverse, will eventually become a strong enabler, helping to unleash its true potential

AI will act as a transformative force and play a pivotal role in propelling the growth of the metaverse, driving innovation and enhancing user experience in an interconnected virtual realm.



Content creation and personalisation

AI, supported by NLP and machine learning, continuously adapts content and experiences, based on user preference, to automate content creation and ensure hyper-personalised interactions.



Analytics and automation

AI analytics models provide data-driven insights on user behaviour to optimise content curation, user support and resource allocation; virtual assistants streamline processes to offer contextually relevant guidance and support.



Autonomous entities and avatars

AI-driven autonomous agents and avatars equipped with reinforcement learning and natural language understanding, enhances realism and enable dynamic social interactions.



Communication and language

AI language models, with real-time translation and interpretation capabilities break language barriers and facilitate cross-cultural communication and collaboration.



Physics and realism

AI-powered physics engines supported by machine learning and real-time simulations create realistic interactions with objects and environments, thereby enhancing immersion.



Security and trust

Advanced AI algorithms, including deep learning and behavioural analysis, proactively detect and counteract cyber threats to ensure a secure and trusted user experience.



Scaling-up: Concrete and organised efforts at defining standards that enable interoperability

Interoperability fosters seamless interactions between virtual worlds to enhance user engagement and retention. Standardised interoperability protocols can drive innovation and collaboration among companies to accelerate metaverse development.



Interoperability



The current phase is one of **natural consolidation** for emerging technologies and the **establishment of a strong foundation** for transformative growth of metaverse is based on real business value beyond hype.

Metaverse Standards Forum

A non-profit consortium that drives metaverse interoperability standards.



- The consortium has established exploratory, and domain working groups for metaverse interoperability and collaborated with global standards organisations such as Khronos Group, W3C, Open Geospatial Consortium, and others. It aims to increase membership to drive collaboration.
- Priority areas: Domain and tech reports, use case recommendations, pilots, testbeds, open-source tools for metaverse standards.

Diverse group of 2,400+ members

- Tech industry leaders
- Standards development organizations (SDOs)
- Virtual platform providers & content creators
- Universities and research institutions
- Innovation hubs and incubators
- Industry consortia and forums
- Advisory companies, etc.



Open Metaverse Interoperability Group (OMI)

OMI is dedicated to establishing interoperability standards for identity, social graphs, inventory protocols and other essential elements. It cultivates a human-centric metaverse community and upholds core values such as collaboration, incremental work, sustainable innovation, empowerment and resiliency.

OMI's mission is to promote collaboration, innovation and an inclusive metaverse ecosystem. These efforts collectively drive metaverse growth by ensuring interoperability and standardisation, fostering collaboration, and empowering creators.



Embracing the inevitable: **Seize the Metaverse opportunity, in time**

Recent doubts in some pockets should not overshadow the vast potential of the metaverse. Isolated setbacks reflect the opinions of a few and not the entire landscape. The initial hype has also consolidated into real value, with businesses benefiting from its transformative impact.

A broader, reality-grounded perspective acknowledges the influential factors propelling the metaverse's expansion.

If we consider the big picture, the domain is likely to stay somewhat volatile in the near future. It is important for business leaders and functional heads to stay aware and keep their businesses and functions on standby mode.

Strategic imperatives for Leaders

Stay informed

Monitor ecosystem shifts in both traditional and non-traditional domains.

Timing matters

Prepare to act when the right moment arrives. Strike a balance between early mover advantage and cost efficiency.

Evalueserve's insights and advisory services empower businesses across industries and functions to be future-ready.

Leadership: Preparing leaders to steer through turbulence

Strategy: Enabling metaverse-aligned roadmaps for lasting growth

Marketing: Identifying relevance of metaverse and related opportunities

Insights: Providing data-driven foresight needed to drive the metaverse strategy

Product and innovation: Innovating with metaverse-enabled solutions

Partnership: Forging strategic alliances to amplify metaverse capabilities

Sales: Navigating new channels and customer interactions

Stay informed and make time count. Reach out to us to explore how our experts can propel you through the metaverse and help you seize opportunities and navigate potential challenges.

Let's begin the conversation

Connect with our **Metaverse** team



Amol Mehta
Associate Director
TMT Practice | Evaluesserve
[✉](#) [in](#)



Bhupender Singh
Senior Analyst
TMT Practice | Evaluesserve
[✉](#) [in](#)

About Evaluesserve

• Industry

Technology, Media & Telecommunications

Increase competitiveness, enhance customer experience, and launch innovative products and services.

[Evaluesserve TMT Practice](#)

• Artificial Intelligence

Power Decisions with AI

Propel your business with AI for Research and Analytics (AIRA)

Scale with **AIRA** (AI for Research and Analytics)
Accelerate insights and content generation with **Generative AI**

[Evaluesserve AI Labs](#)

Read about Evaluesserve's latest insights on **Metaverse** [here](#)

Disclaimer

The information contained in this whitepaper has been obtained from reliable sources. The views and opinions expressed in this point of view are those of the authors, based purely on personal experience and research and do not provide investment advice or recommendation. Evalueserve makes no representation, expressed, implied or statutory, as to the completeness of such information, which may be subject to change without notice. The output is in accordance with the information available on such sources and has been carried out to the best of our knowledge with utmost care and precision. The logos, trademarks, and commercial values of the companies mentioned in this whitepaper are the intellectual properties of their respective owners. Evalueserve acknowledges and respects their ownership. We do not claim any ownership or affiliation with these companies. While Evalueserve has no reason to believe that there is any inaccuracy or defect in such information, Evalueserve disclaims all warranties, expressed or implied, including warranties of accuracy, completeness, correctness, adequacy, merchantability and / or fitness of the information.