

# THE METAVERSE AND BEYOND: ACCELERATING INNOVATION IN TRAVEL AND HOSPITALITY



## On the cusp of a paradigm shift

The travel and hospitality industry is poised for a huge disruption. As the industry emerges from a pandemic-induced slowdown, the demand has risen to pre-pandemic levels indicating a promising future. Between 2020 and 2040, air passenger traffic is expected to increase at an annual rate of 3.3%, with most travelers belonging to the millennial and Gen Z segments. The cargo volumes are expected to grow by 50% by 2030.

To capitalize on this huge demand and opportunity, the industry must overcome challenges by providing differentiated customer experience, managing operations efficiently and addressing their sustainability goals. Providing a rich, differentiated, personalized user experience across various touch points using the metaverse will be key for brands to connect with next generation customers and employees who are technology savvy and keen on new experiences.

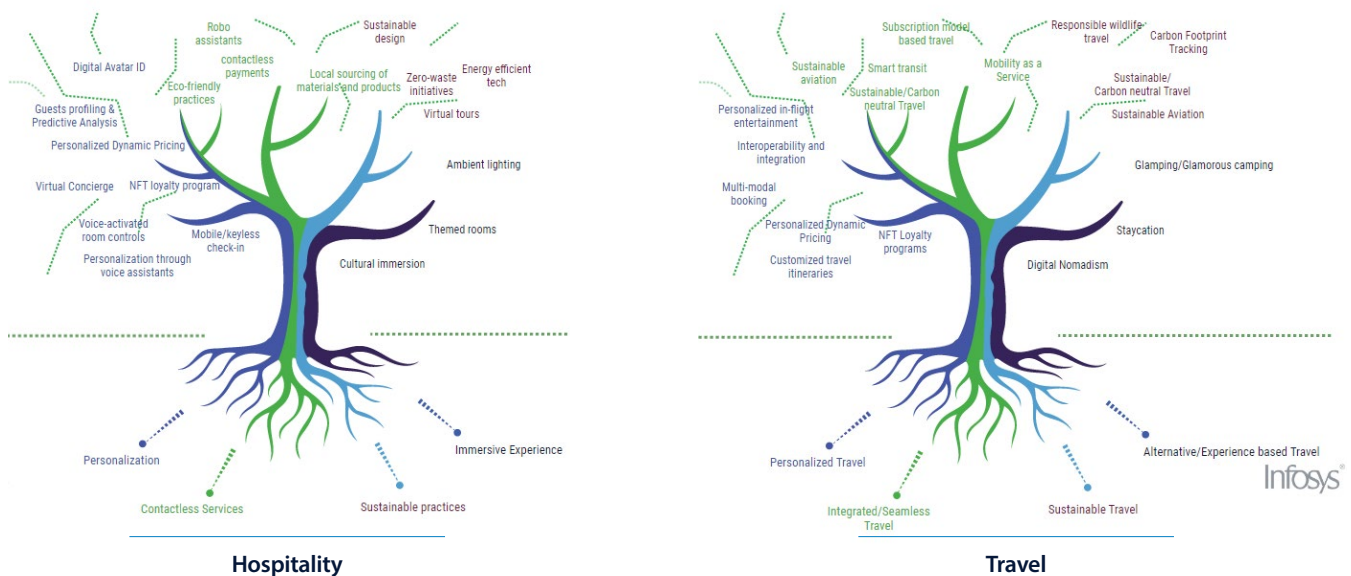
A recent McKinsey report suggests that value creation through the

metaverse can be a massive \$5 trillion by 2030<sup>1</sup>. In addition, research firm Gartner<sup>2</sup> predicts that over 40% of large organizations worldwide will use a combination of web3, spatial computing and digital twins in metaverse based projects to increase revenue by 2027.

Metaverse will also significantly impact the e-commerce industry; McKinsey estimates it may have a market impact of between \$2 trillion and \$2.6 trillion by 2030. In addition, the airline shopping experience will likely change significantly as the brands can capitalize on the time spent before and during the flight to promote shopping by engaging customers through these new sales channels.

As this segment attracts huge investments, leading travel and hospitality industry brands are keen to make an impact. These brands want to be at the forefront of metaverse adoption to bring differentiated experiences to customers and employees and be leaders in this space. Hence, emerging technologies like the metaverse will provide a significant advantage over the competition and drive innovation across the value chain.

## Trends Tree for Travel and Hospitality



The hospitality industry is constantly evolving and adapting to the changing needs and preferences of travelers and guests. Some emerging trends are:

**Personalization** – Hospitality companies use data analytics, artificial intelligence (AI) and customer feedback to offer dynamic pricing, personalized recommendations, customized interactions, and loyalty programs to attract new customers and increase stickiness with the existing ones.

**Sustainable Practices** - Hospitality businesses can adopt green practices such as using renewable energy sources, reducing waste, recycling, sourcing locally and ethically, and offering eco-friendly amenities to cater to travelers keen on sustainability.

**Contactless Services** – Hotels worldwide have utilized technology to deploy low touch, high quality services such as keyless check-in, voice activated controls, online payments and robot assistants to satisfy demands for contactless services and safety.

**Immersive Experiences** - Hospitality businesses use VR and 360-degree views to display hotel amenities, local attractions, and activities to help customers visualize and explore options before booking, inspiring them to travel. Hotels also use AR to overlay digital elements onto the real world, such as navigation tips, menus and reviews. In addition, metaverse and related VR experiences can offer hospitality businesses new opportunities to create virtual venues, events, experiences and communities to attract and engage customers to influence their decision making, satisfaction and loyalty.

<sup>1</sup>Value creation in the metaverse | McKinsey

<sup>2</sup>The Gartner Top Strategic Technology Trends for 2023: The Metaverse



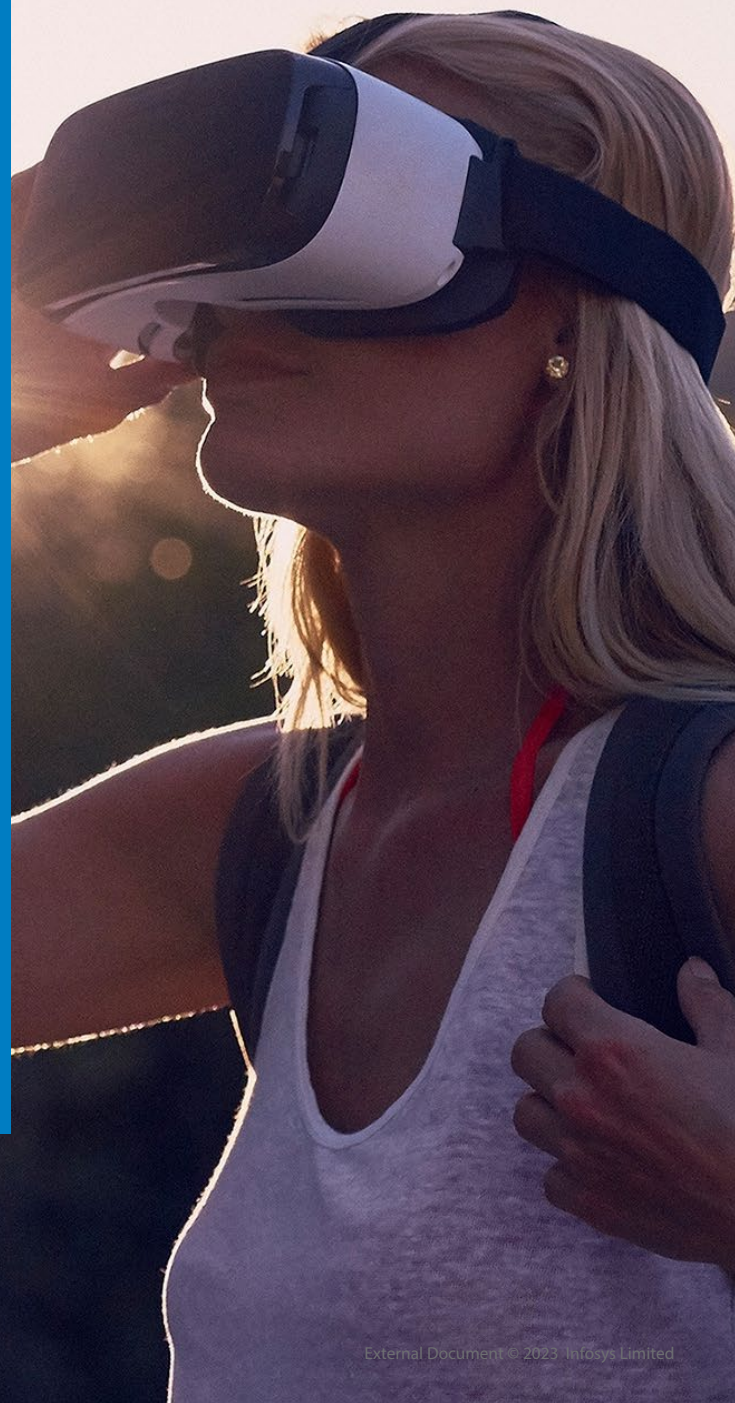
## The metaverse technology stack (or) Building blocks of the metaverse

The word “metaverse” was initially coined in 1992 by Neal Stephenson in his science fiction novel Snow Crash. Over thirty years later, the metaverse has the potential to revolutionize the travel and hospitality industry. Metaverse is a confluence of technologies coming together to take us beyond the boundaries of the real world. Technologies like X-Reality (e.g., AR, VR and Mixed Reality), digital twins, Generative AI, 5G, blockchain, NFTs and digital currencies are maturing rapidly. Enterprises can utilize these emerging technologies to create a creative and innovative immersive experience for their users.

Some of the technologies that will influence and accelerate the adoption of the metaverse include -

- **VR** can be used to create immersive travel experiences, such as virtual tours of hotels or resorts. Places that were impossible to visit for people with disabilities can now come live through these experiences.
- **AR** can help provide information about travel destinations or create interactive experiences, such as games or scavenger hunts.
- **Blockchain** can be used to create digital assets that can be used in the metaverse, such as virtual real estate or NFTs.
- **Generative AI** can create virtual assistants to provide personalized travel experiences and even plan itineraries. Additionally, it can automate tasks, such as booking travel or managing hotel reservations, while experiencing the travel destination in the metaverse experience.
- **Digital Twin** will be pivotal in shaping future industries to bring new products and services and drive innovation as the line between physical and digital environments blur.
- **5G and Edge** technologies allow faster and more reliable internet connections, essential for creating a smooth and seamless metaverse experience.

We expect to see more innovative and exciting examples shaping this industry as the metaverse develops.







## It's real for enterprises

Metaverse and digital technologies can help address some of the industry's key challenges. As technologies mature, several industry leaders have already employed innovative concepts to provide a differentiated experience for customers and employees.

- Qatar Airways, an early adopter, launched Qverse, which helps passengers experience their premium check-in area at the airport and their award-winning business class suite through the first-ever metahuman cabin crew 'Sama.'
- Vueling, a Spanish low-cost carrier in Europe, is partnering with Next Earth to open a metaverse sales channel through which passengers can visualize and book their travels. Passengers can also track carbon emissions and book "carbon positive" transportation via the metaverse and companion apps.
- Dubai has officially unveiled a Metaverse Strategy, where some of the most popular restaurants, hotels and nightlife spots have started using this technology and accepting crypto and digital payments.
- In partnership with Renderverse, Marriott and Atlantis are replicating real-life hotels in the metaverse to host virtual conferences and events. This trend will be adopted by many in the hotel industry over the coming years.
- Infosys Tennis Platform pioneered a world-first virtual reality tennis experience delivered on PlayStation® VR, transporting fans into a live stadium environment from wherever they are. In addition to creating 360-degree views of matches, it also integrates tennis statistics into the screens, so fans can truly understand the science behind all the action and even shop in a VR store.



## Metaverse-driven innovations for everyday life

### a. Planning vacations and a complete itinerary

Conversational AI assistants can plan the itinerary for a vacation facilitating one to experience the travel location and select rooms or tourist attractions to provide an enriching and holistic experience. Here's how it can play out.

### Hotels and resorts can provide an immersive customer experience

It is the year 2025. Dave wants a break from work and plans a vacation with his friend. Both want to explore a few holiday destinations and enter the metaverse space for ABC Resorts to check out various properties. Based on their profile and past travel history, they are provided with options for beaches, mountains and adventure destinations. They could experience these properties and facilities provided through the latest meta headset and decide on a beachside hotel. Dave made a booking through a combination of digital currency and loyalty points stored and validated in the blockchain network.

### b. Digital twin for managing operations

As enterprises build digital twins in the metaverse to simulate various scenarios and help make data based decisions, the impact in managing operations will be significant.

Aircraft engine maintenance with an expert engineer guiding virtually can help increase the productivity of the maintenance engineers and reduce engine downtime. Leading manufacturing companies are building digital twins for their factories to make them lean and sustainable by simulating different operations efficiencies.

### c. Aviation Training

Metaverse can be used to train various stakeholders like cabin crew and ground handling staff through immersive experiences to increase efficiencies. This training requires navigation through complex environments of airport craft and airports, so the metaverse can be a big differentiator in making this virtual. For example, Emirates simulates real-life scenarios using metaverse for cabin crew training.

### d. Collaboration at workplace

The pandemic accelerated the adoption of remote and virtual collaboration significantly. Meta Horizon workrooms and Microsoft Mesh are already enabling enterprise teams to make virtual collaborations a reality. Additionally, as more young people enter the workforce where teams are across different countries and ethnicities, virtual collaboration spaces provide a compelling value proposition for diverse teams to collaborate on a common platform.





## Challenges and Risks

Though metaverse and related technologies are still nascent, not attempting anything is a greater risk for the brands in this space. The adoption of new technologies comes with its own set of challenges and risks. Some of the key issues are as follows:

- As many of the technologies driving the metaverse are at different maturity stages, there needs to be a long-term strategy to align with this evolution
- Organizations must have a mitigation strategy to handle issues with new technology, ensure the metaverse platforms are secure, and take necessary steps to protect end-user data.
- Security and personal information are key in the metaverse as users create digital avatars and own digital properties through NFTs and cryptocurrencies.
- Interoperability across platforms, definition and emergence of standards are critical to successful adoption. Users should be able to move across platforms seamlessly, and the ability to carry their various digital properties will be crucial.
- NFTs and cryptocurrency adoptions are not yet mainstream enough to enable commerce in the metaverse.
- No clear regulations govern the use of metaverse technologies, thus making compliance vague.
- Uncertainty about how the metaverse will work, and business adoption make it challenging to justify the cost of investing in it.





## Getting started with the journey

The metaverse has strong roots in the gaming industry. Of the 58 million active users on Roblox and growing at over 20% yearly, most users are in the 9-15 age group. They will be the key segment for companies in the travel and hospitality industry as they are highly comfortable navigating the virtual world, excited to establish digital avatars and keen to engage with brands that can provide differentiated experiences.

Metaverse has the potential to revolutionize the travel and hospitality industry by making it easier for people to choose their vacations wisely, connect with other travelers and find information about travel destinations. However, there are also some challenges that businesses will need to overcome to integrate the metaverse into their operations successfully.

By recognizing these challenges, early adopters who enhance customer experience will lead the change and win in the new digital world. The time is not far away for metaverse technologies to enable users to move into the virtual world for entertainment and work. Therefore, brands must start investing in limited scenarios and evolve them by piloting with selective use cases.

Remember, the metaverse is still an emerging and complex concept that requires further exploration and understanding. There are many unanswered questions and uncertainties regarding the technical, social, ethical, and legal aspects of the metaverse. Thus, we recommend that practitioners adopt a proactive and collaborative approach to embrace the metaverse as a new opportunity for innovation and differentiation in the travel and hospitality industry.

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