



The metaverse opportunity for the telecom operators

**Building virtual worlds
to connect with the next
generation of customers**

Abstract

The metaverse can change how we think, work and act drastically. It represents a potentially transformative development unlike anything that currently exists, with endless possibilities for innovations and creativity. According to a McKinsey report, this area can generate up to \$5 trillion in value by 2030.

Businesses worldwide are assessing its impact on their industries. As telecom operators transform into providers of next-generation digital experiences, they must take advantage of the immense opportunities the metaverse offers.

In this white paper, we explore why operators should invest in building engaging experiences in the metaverse and how they can accomplish it.

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Introduction: What is metaverse

The metaverse is a still-evolving concept that has led to a proliferation of ways in which people define it. Most definitions have the following common elements:

- The 3D version of the internet where people live in it rather than just looking at it.
- An immersive digital environment that allows people to socialize as “avatars” or proxy selves, buy & sell lands, buildings, avatar skins and other physical entities using cryptocurrency.

It is also helpful to understand what the metaverse is not:

- Metaverse is not just AR/VR
- Metaverse is not just gaming
- Metaverse is not just immersive devices
- Metaverse is not just a virtual world.

By definition, it's the next iteration of the internet that seamlessly combines our digital and physical worlds.

Characteristics of metaverse

The metaverse is still in the early stages of development, and its full potential is not yet realized. However, many companies are eager to capitalize on the growing interest and hype surrounding the metaverse. As a result, there has been a surge in the number of metaverse initiatives being launched, with new projects and ventures announced regularly. It is important to establish a common frame of reference to differentiate between true metaverse initiatives and other virtual or augmented reality platforms. Our perspective is that a platform should meet at least four out of the six characteristics listed below to be considered a metaverse:



It is important to note that the metaverse is a rapidly evolving field, and these characteristics may evolve as well.

Layers of metaverse

As operators formulate their strategy for the metaverse, viewing it as comprising of distinct layers that constitute a value chain can be beneficial. These seven layers symbolize various segments of the metaverse value chain where firms currently seek to generate value for their clients.

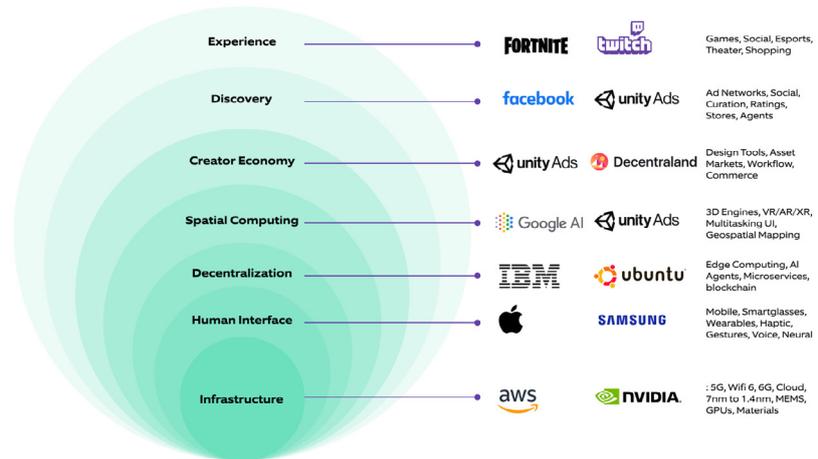


Figure 1 7 layers of the metaverse

For telco operators, however, the above can be simplified to the following 3 most relevant layers—experience, creator economy, and infra.

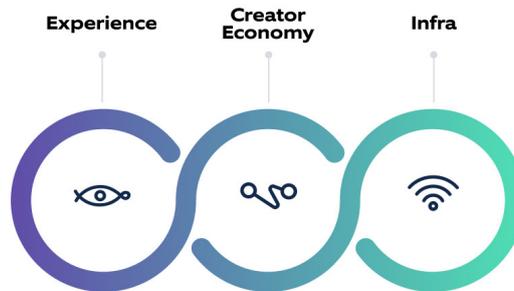


Figure 2 3 layers of the metaverse for Telecom operators

Experience: Create an immersive 3D experience where customers can engage with different telco products and self-care services. Telecom operators can also utilize these experiences for brand building, creating NFTs for digital identities, improving engagement by building gaming and other social experiences.

Creator economy: Design platforms, tools and marketplaces to enable creators and partners to create experiences and 3D assets for the metaverse.

Infra: Use telecom infrastructure to sell the metaverse, extend partnerships with device providers to include AR/VR, and use data & analytics to create new revenue streams.

Telcos can unlock a full spectrum of opportunities within the metaverse by expanding beyond the traditional and moving toward new capabilities and services.

Why must operators build experiences in metaverse

According to McKinsey, operators have underperformed big tech companies over the last decade despite heavily investing in 3G and 4G networks.

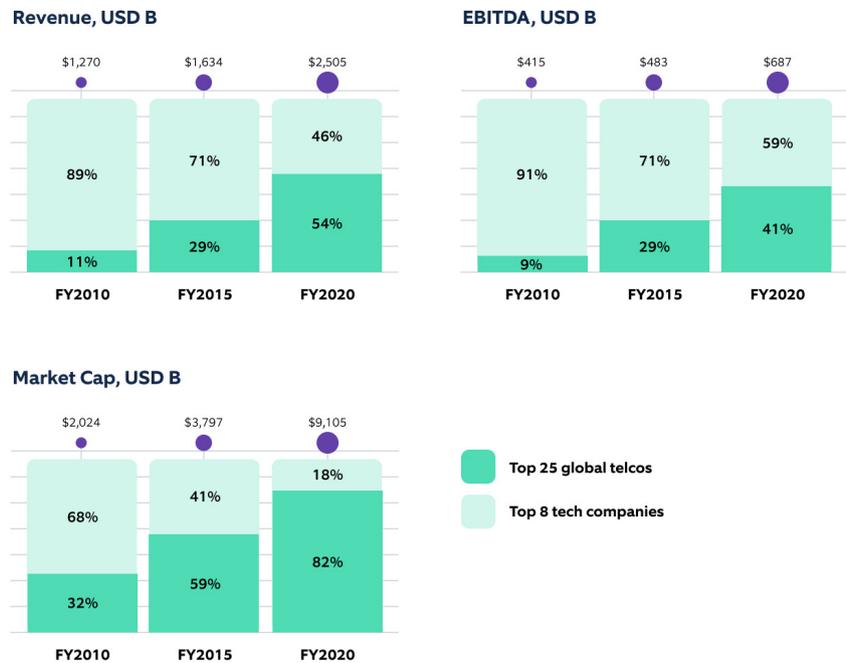


Figure 3 Financial trends for telcos & big tech

Top 25 global operators by revenue in 2020, excluding private companies. Includes AT&T, Verizon, Deutsche Telekom, China Mobile, NTT, T-Mobile, China Telecom, Telefonica, Orange, America Movil, Vodafone Group, KDDI, China Unicom, Softbank Corp, NTT DOCOMO, BT Group, KT, Telecom Italia, BCE, SK Telecom, Telstra, STC, Telenor, Etisalat, Swisscom

Top 8 tech companies include Facebook, Amazon, Apple, Netflix, Google, Baidu, Alibaba, Tencent

For telecom operators, the metaverse offers a once-in-a-decade opportunity to be once again at the centre of the consumer's digital experiences.

- ### Changing demography & customer behavior

The next generation of customers are already in the metaverse. According to Roblox, 67% of their 58 million daily active users are under the age of 16 years. These users have grown up living in these virtual worlds and are comfortable owning assets (like NFTs) and transacting in these virtual worlds. As per a survey by Obsess, 75% of Gen Z shoppers have purchased digital items within a video game, and 60% of these shoppers think that brands should sell their products on metaverse platforms.

- ### Increase ARPU by up-selling & cross-selling core telco products

By building experiences in the metaverse, operators have a chance to up-sell and cross-sell their core telco products like voice, data, top-ups etc. Additionally, consuming experiences in the metaverse requires a lot of data. As per Credit Suisse, even modest metaverse usage in the next decade can lead to 20x of current data usage. This allows operators to leverage the massive investments that they have made in 5G networks.

- **Improve customer engagement**

Creating highly engaging experiences in the metaverse enables operators to build deep connections with their customers. The rich data generated by users while in the metaverse can be used to craft personalized offers and services. Additionally, the metaverse can act as another channel which operators leverage for offering omnichannel customer care services.

However, the metaverse landscape is highly competitive, with many innovative start-ups vying for a share of the value chain. Additionally, as this is still a nascent field, the use cases and standards of the metaverse are yet to be fully established. Operators who are quick to capitalize on this opportunity have the potential to shape the development of the metaverse, establish a loyal customer base, and gain a competitive edge over their rivals.

Realizing these highly personalized and immersive experiences necessitates access to data and low-latency networks. Telecom operators have a unique advantage in the metaverse as they already own the networks that are crucial for the metaverse to function, and they have a pre-existing customer base.

Imagining a telco-operated metaverse experience

Ethan is an 18-year-old tech-savvy Gen Z fresh into college. Growing up, Ethan is used to platforms like Roblox and Minecraft. Daily after college, he connects with his old school friends (now in different parts of the country) over games on Roblox and Fortnite. The few hours Ethan spends on these platforms every day are not just about gaming but also socializing with old friends – learning about their new experiences, friends, and brands they engage with. Ethan has very less time for traditional social networks and messaging services. Instead, it is these 3D immersive platforms that provide his social outlet.

Ethan is just a paradigm of millions of Gen Z consumers globally who are now at the cusp of their adulthood. To tap into this lucrative market, let's imagine a telecom operator (operator X) that has dived into the metaverse by building an experience on Roblox.

Over one of their daily games, Ethan and his friends come across a virtual billboard advertising operator X's newly launched experience on Roblox. Ethan is intrigued because the virtual experience advertises what looks like a fun football game and has the endorsement of their favorite live streamer from Twitch. Ethan and his friends decide to try it and immediately hop onto the Roblox app from their respective devices.

They are welcomed to a fun, immersive experience that may be overwhelming to people unfamiliar with these 3D experiences. But Ethan and his friends are at home. At its core, the vast virtual world has a football game adapted to the quirky look and feel of Roblox. In addition, there are a lot of mini-games to earn bonus points. It is fun and competitive at the same time. Ethan can easily see himself spending significant time playing the game with his friends over the next few months. With the football world cup coming up, this seems to be a great way to spend their time as they discuss upcoming matches. It could be their new daily routine. They might also invite their new friends from college to join in the fantastic new experience.

As Ethan spends time in operator X's experience, he learns about their new unlimited data plan placed carefully across the experience. The unlimited plan seems so much better than what is being offered by his current operator. Ethan learns that he can exchange points earned from the Roblox experience to get discounts on their monthly bills! This seems like the perfect way to play, socialize and

save precious money on data. Ethan decides to explore these plans on operator X's website with his friends.

Operator X intends to use the metaverse experience to sell its core products of voice, data, and other value-added services to a new generation of customers. Additionally, it plans to create new revenue streams through in-app purchases of virtual assets like avatar clothing, accessories, level upgrades, etc. With constant updates to its metaverse experience, operator X hopes to keep their customers engaged and be at the center of everything they do digitally.

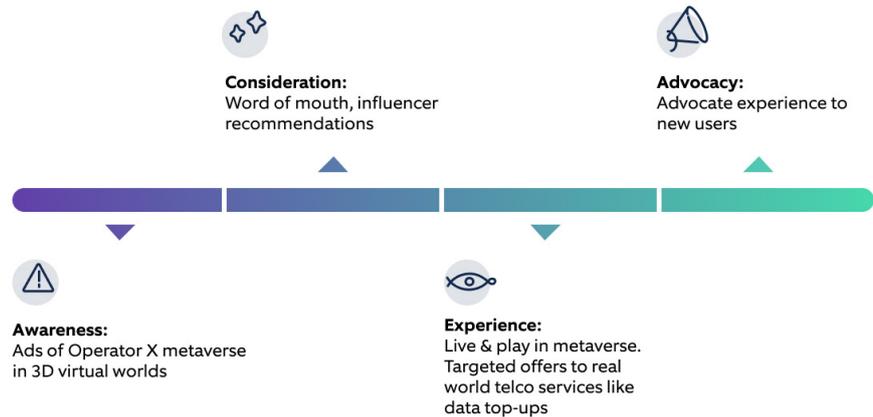


Figure 4 Customer journey

Experiences like above are a reality today. Innovative companies across industries (e.g. Nike, Chipotle, Gucci) are using platforms like Roblox to connect with their next generation of customers.

Outlining the metaverse ambition

The metaverse is expected to have a significant impact on the future of enterprises and society as a whole. While defining their metaverse strategy, executives must consider how the metaverse (with its use cases and core target audience) can help telecom operators fulfil their business objectives – increasing ARPU, creating new revenue streams, and increasing customer engagement.

It's essential to keep up with the evolution of the metaverse and related technologies, such as AR/VR, NFTs, etc., and be prepared to adapt and adjust strategies accordingly.

Outlined below are steps to prepare your business for metaverse:

- **Define** your medium & long-term business objectives from metaverse, e.g., increase customer acquisition, increase ARPU, and improve customer satisfaction & retention.
- **Ideate** breakthrough ideas for pressing business objectives and prioritize them.
- **Experiment** in metaverse with well-defined KPIs. Launch focused & targeted experiments and evaluate.
- **Scale** successful experiments while continuously searching for new opportunities to experiment.

Inspiration stories

	<p>Building metaverse experiences: MTN has purchased 144 plots of digital land in the Africarare Metaverse UbuntuLand, to build engaging experiences for its customers. Through its presence in the metaverse, MTN intends to attract customers by offering experiences like gaming and music.</p>
	<p>Partnerships: SK Telecom has launched its own metaverse platform - ifland in South Korea. It has partnered with operators like Deutsche Telekom and e& to bring its metaverse offering to other markets.</p>
	<p>Gaming: Verizon announced partnership with Niantic, the makers of Pokémon Go, to demonstrate how 5G and MEC enable next-level experiences.</p>

Choosing the right platform

Considerations while choosing a metaverse platform

As you experiment and build experiences in the metaverse, one key element is choosing the platform that is right for your use case. Today there are numerous platforms available such as Roblox, Decentraland, The Sandbox, etc., which easily allow you to build unique experiences.

Each platform has its unique strengths. The below quadrant gives an overview of how these metaverse platforms currently position themselves across the following 2 dimensions – openness and platform maturity.

Openness: From the standards and philosophy point of view, platforms can be classified into Web 2.0 and 3.0. Platforms following Web 3.0 standards tend to be more open supporting decentralization and shared ownership with concepts like NFTs and blockchain.

Platform maturity: Platform maturity refers to the level of support these platforms offer to creators of experiences, i.e., developer support, documentation, and accessibility.

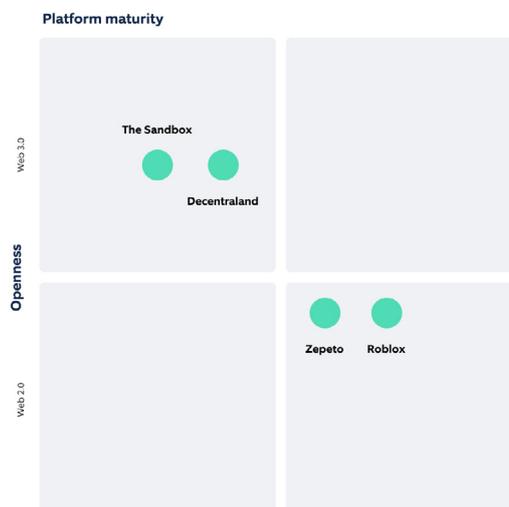


Figure 5 Metaverse platforms

Additionally, operators should consider the platform’s core target audience, its constraints, and regulations specific to their countries like availability of app stores, legal status of crypto, etc.

It is important to choose the platform carefully so that capacity limitations to support a particular use case aren’t discovered late in the development process.

Multi-experience approach

It may not be possible to meet all objectives and serve all target audiences with a single metaverse experience. Operators must consider building multiple experiences spanning across different platforms or on a single platform.

For example, Gucci has created Gucci Garden as well as Gucci Town (which has become the permanent destination in the metaverse now). In Sep 2022, Gucci launched Gucci Vault: a 2-week experience in Sandbox showcasing its storied heritage to a new audience. Similarly, Chipotle has launched multiple experiences in Roblox, each with its own objective and success measure.

All these experiences must tie into a single thread, a unified strategy that aligns with the enterprise’s overall objectives. Where possible, the different experiences must interact with each other. For example, experiences can be connected in ways that allow users or their virtual assets to move seamlessly between different platforms or experiences. However, interoperability between different metaverse platforms is a challenge as there are no established standards.

Managing metaverse initiatives

Managing initiatives in the metaverse can be complex and dynamic, as it is a new and rapidly evolving field. To navigate these challenges, adopting an agile and lean mindset is important when executing metaverse initiatives. This includes focusing on targeted experiments with clearly defined success metrics, rather than attempting to develop a comprehensive solution all at once. The approach enables teams to pivot and adapt quickly to changing requirements or new information.

Below is an indicative roadmap for operators to build experiences on platforms like Roblox:

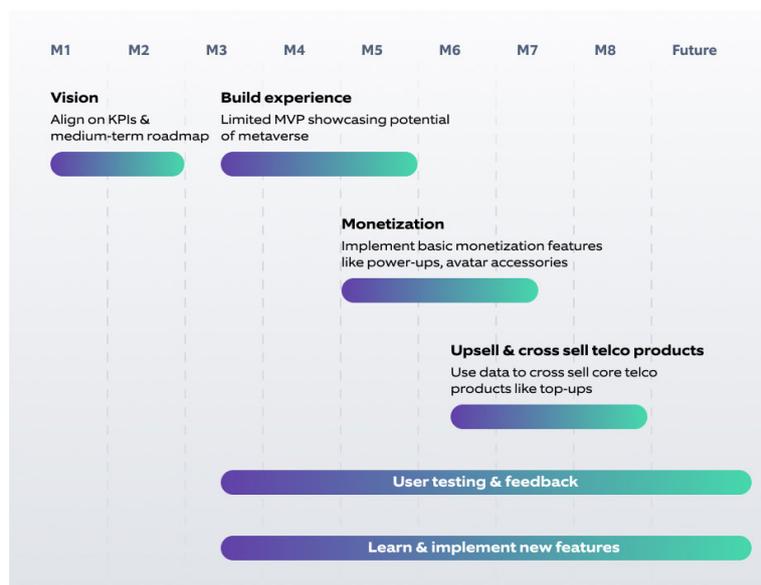


Figure 6 Indicative roadmap for building experiences in metaverse

Skills required

Today’s customers are used to on-demand, hyper-personalized, and highly engaging experiences offered by OTT platforms like Netflix and Amazon. To compete, operators must create virtual experiences with all the attributes above. This is a complex exercise and requires coming together of multiple skills.



Figure 7 Skills required for building experiences in metaverse

This is not an exhaustive list, and other skills may be required depending on the specific use case and platform you are working with.

Indicative solution architecture

We recommend building these engaging experiences using a lightweight service-based architecture to ensure scalability, flexibility, resilience, and better utilization of DevOps. To leverage the full potential of the metaverse, integrations can be developed with operator OSS and BSS systems for customer data, analytics, etc.

Below is a simplified solution architecture for building immersive experiences on metaverse platforms.

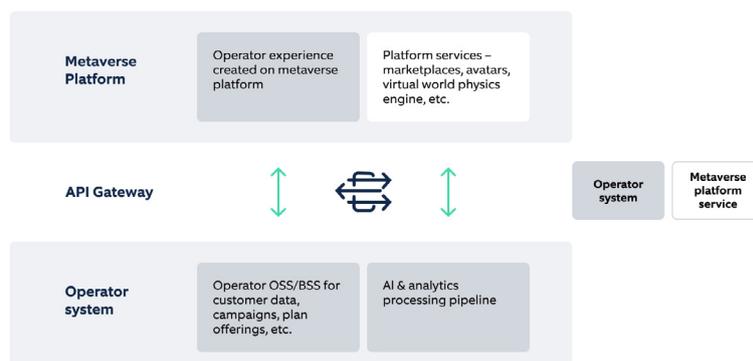


Figure 8 Solution architecture for building experiences in metaverse platforms

Way forward

Telcos must expand beyond the traditional to unleash the full force of the metaverse. Metaverse has the magic of the future - to expand telecom offerings, deepen customer engagement, and drive revenue growth, among many other things.

At Nagarro's telecom business unit, we partner with operators to evaluate strategies for building metaverse experiences that are right for them.

Using our "thinking breakthroughs" framework, we take our design thinking approach with a product mindset to create metaverse-based experiments - *unlocking immense value by aligning investment to business goals, digitally transforming businesses, and achieving consistently high RoI.*

"The metaverse is an interactive, virtual collective shared space that is persistent and allows immersive experiences. It offers a unique opportunity for brands and telecom operators to connect with the next generation of consumers already present on popular metaverse platforms like Roblox, Decentraland.

At Nagarro, our strength has always been our work on complex breakthrough initiatives that transform enterprises. We are partnering with a leading telecom operator to launch their new digital telco brand by creating a sports-themed metaverse targeting the youth customer segment. We are involved in every step of their metaverse journey— from conducting design workshops for defining their metaverse strategy to creating the MVP product roadmap and its subsequent implementation.

To help us in our metaverse journey, Nagarro has acquired RipeConcepts, a company that specializes in delivering high-quality, multi-channel creative content and excels in the creative digital disciplines of design, illustration, 3D modelling, animation, and marketing."

Ananda Sen Gupta

Managing Director, Telecom, Nagarro

Are you interested? Let's talk!

Author



Vaibhav Nigam

Product Manager with the telecom practice at Nagarro. His focus areas include AIOps, Web 3.0, and metaverse initiatives for global telecom operators.

About Nagarro

Nagarro is a global digital engineering leader with a full-service offering, including digital product engineering, digital commerce, customer experience, AI and ML-based solutions, Cloud, immersive technologies, IoT solutions, and consulting on next-generation ERP. We help our clients become innovative, digital-first companies through our entrepreneurial and agile mindset, and we deliver on our promise of thinking breakthroughs.

We have a broad and long-standing international customer base, primarily in Europe and North America. This includes many global blue-chip companies, leading independent software vendors (ISVs), other market and industry leaders, and public sector clients.

Today, we are over 18,000 experts across 33 countries, forming a Nation of Nagarrians, ready to help our customers succeed.