A whole new world?
Exploring the metaverse and what it could mean for you
April 2022
What’s the big deal with the metaverse?

Remember when the first smartphones were launched without a keyboard? Many people wondered whether they would ever take off. But in just a few years, smartphones changed the experience of the internet for billions of people and enabled new business models that transformed transportation, hospitality, food delivery, personal entertainment, social interaction, and more.

When a new technology comes along that could change how we interact with the digital world, the implications can be staggering—not just for tech companies, but potentially for every company.

That’s one reason why people are talking so much about the metaverse, a 30-year-old idea that has attracted tremendous interest and substantial investment over the last year. Could it be the next way people access digital resources and experiences? Could it have the kind of impact on business and society that earlier technologies (such as the PC, the internet, or the smartphone) had when they went mainstream?

It’s far too soon to tell, but it’s not too soon to ask. As executives hear the buzz about a technology generating tremendous interest and investment, they may want to know more:

- What is the metaverse? (pg. 3)
- Why is it getting so much attention now? (pg. 4)
- How could it evolve over the next 5–10 years? (pg. 5-6)
- What should you watch for as the market matures? (pg. 7-8 and appendix)

The goal of this report is to provide a brief overview of future possibilities (and pitfalls) as executives consider their entry into what some believe could be the next new world for almost every business.

---

1 As of early 2022, an estimated 6.6 billion people have a smartphone. Statista, released February 2022
2 Ronit Ghose, et al., Metaverse and Money: Decrypting the Future, Citi Global Perspectives and Solutions, March 2022
What is the metaverse?

The metaverse is the popular term used to describe what many expect to be the next significant paradigm for how we use digital technologies and networks to interact and collaborate with others and have virtual experiences of all kinds.

It’s not a single technology or device, and it’s not a service of any one company. It’s the convergence of several separate technologies, all of which are quickly maturing for mainstream use. Together, those technologies can create the experience of an immersive, three-dimensional environment in which users interact with their surroundings and other users as if they are in a shared space.

But a fully developed metaverse is more than merely a virtual space. It also has at least two other important characteristics that enhance its potential as a new platform with a wide variety of uses.

First, it is likely to include both the physical and digital/virtual worlds in the user’s experience. Rather than being an entirely separate space, the metaverse is a platform in which the virtual world and the physical world can be linked, which could be important to how it develops both for consumer and enterprise applications.

Second, the metaverse is expected to have a native economy, including digitally native assets and trade. While the internet today has an important relationship to the economy, the metaverse could have its own economy.

Elements of the metaverse are already here: immersive virtual worlds with avatars that interact with one another, digital overlays on the physical world that provide data or commentary on what the user sees, digitally native trade and economic activity. But the metaverse describes the context in which they operate together beyond the component parts.

While the building blocks of the metaverse are already all around us, the full realization (and adoption) is likely to be years away. Many of the necessary technologies still have a long way to go before the full potential is available at truly mass scale. As a result, trying to describe what it will be is like trying to describe to someone in 1990 what the internet would become, or trying to imagine back in 2005 what would happen when hundreds of millions of people got smartphones.
Why is the metaverse getting so much attention now?
Several factors—technical, social, and financial—are converging to make the metaverse particularly significant now.

A CLUSTER OF MATURING TECHNOLOGIES
> User interface: Extended reality - AR/VR/MR
> Computation and storage: Cloud and edge computing; AI/machine learning
> Networks: 5G; fiber optics

BEHAVIORAL SHIFTS AMPLIFIED BY COVID-19
> Increasing “digitization” of social and work interactions
> Rise of e-commerce and shift in consumer preferences

MAJOR CAPITAL INVESTMENTS
> $80B+ corporate investments in last 12 months
> $10B+ venture capital investment in 2021

INCUMBENTS’ SEARCH FOR GROWTH
> Today’s digital market leaders and existing platforms are seeking new avenues to grow

EVOLVING DIGITAL ECONOMY
> Growth of digital-native assets and supporting economic infrastructure
> Increasing popularity of digital asset ownership, cryptocurrencies, and digitally native contracts

1. Extended reality, the convergence of augmented, virtual and mixed realities
3. Jacob Kastrenakes and Alex Heath, "Facebook is spending at least $10 billion this year on its metaverse division," The Verge, October 25, 2021.
What are the factors driving the future of the metaverse?
The evolution of the metaverse will likely depend on consumer response and the outcome of at least four key unknowns:

**STANDARDIZATION**
To what degree do standards and protocols converge? What is the level of interoperability among different platforms?
- Is there a single unified economy across platforms?
- Will digital goods purchased in one metaverse be available in another?
- Are identities persistent across platforms?
- Are there consistent design and programming standards?

**MARKET FRAGMENTATION**
How many market leaders emerge and what consumer and commercial use cases do they serve?
- How much competition is there in the market, and how does this affect innovation?
- How much M&A / market consolidation will we see (or will be allowed)?
- Do different platforms serve different use cases? (e.g., one dominant consumer platform and one dominant enterprise platform)

**USER INTERFACE**
To what degree does the user interface become intuitive and seamlessly integrated into daily life?
- How user friendly and mobile will the predominant interface be?
- Does the interface enable seamless switching between physical and digital worlds?

**GOVERNANCE**
How effectively and consistently are content and conduct regulated? Are IP and digital assets reliably protected?
- Is there strong government regulation or do platforms rely primarily on self-governance?
- To what degree are interactions and transactions secure and trusted?
- Is there an effective process governing tax jurisdictions and legal liability concerns?
What are different ways the future could unfold? Three potential scenarios for the metaverse by the early 2030s

LOW ORBIT

The metaverse excels for the things it's good at but never becomes a general-purpose platform.

- **Fragmented marketplace**, with no dominant player and overwhelming consumer choice
- User interface works well for certain uses but is difficult to integrate into daily life
- **Consumer adoption high** in gaming, sports, entertainment, and some retail
- **Enterprise adoption** limited to some team collaboration, virtual conferences, augmented training/learning, and immersive digital twins
- **Regulation inconsistent** across nations and regions

The bottom line: A specialty market for specific uses that will complement but not replace other technologies.

DOUBLE STAR

There's not a single metaverse, but a handful of major players vying for share of a dynamic marketplace.

- **Lack of interoperability** requires users to commit to a “home” platform
- Abundant capital and active M&A leads to a **highly concentrated** market
- Competition drives accelerated **technological innovation** in hardware and software
- Ecosystems compete for user attention through **exclusive content and partnerships**
- Platforms enact strong and **effective self-governance**

The bottom line: A mainstream market for many applications but split among the next generation of leading platforms.

BIG BANG

An open, interoperable metaverse becomes the dominant interface through which we conduct most of our daily activities.

- User interface enables relatively **seamless merged reality** between physical and digital worlds
- **Identity in the metaverse** is considered equivalent to that in the physical world
- No single provider, with many innovators and an open, interoperable system
- **Pervasive adoption** across consumer and enterprise use cases
- **Strong governance**, with strict and enforceable rules around digital ownership and privacy/security

The bottom line: The full migration of today’s internet and more into an immersive world in which most businesses and consumers operate.
What do we now believe? Initial observations to inform strategic conversations

1. The foundations of the metaverse are already here and being used by millions
   An immersive, persistent virtual world with its own native economy already exists, at least in part. While use cases will evolve, the metaverse is already being used for activities like gaming, social media, boutique shopping, and virtual collaboration.

2. But the full manifestation is probably 5–10 years out
   It will likely take at least 5–10 years for a fully immersive metaverse with widespread user adoption and an established economy to emerge, while an open, fully interconnected metaverse scenario (as described in the “Big Bang” scenario) may be at least a decade away. This scenario still requires significant advances in XR technologies, more bandwidth and processing power, and coordination around standardized protocols and governance mechanisms, as well as compelling use cases for consumer and enterprise users to drive adoption into everyday use.

3. We don’t see a “failure to launch” scenario
   We considered but ultimately excluded a scenario in which the metaverse does not take off at all as an important technology. There is already a tremendous amount of research and innovation underway and millions of existing users. As technologies, capabilities, experiences, and use cases mature, we expect the metaverse will have an increasingly visible role in daily life for both consumer and enterprise users.

4. The competition for share is likely to be fierce
   Given the attractive market opportunity, there is likely to be intense competition among multiple companies vying for leadership of the space. These platforms are likely to compete aggressively for both users and alliance partners, and the opportunities for start-up ventures, corporate ventures, and M&A will likely grow throughout the decade.
What can executives do today?

While the future of the metaverse is still unknown, there are several actions executives can take now.

**Don’t underestimate the potential**

Formulate a metaverse strategy but keep it flexible enough to adapt to changes in technology and consumer preferences. Adopt a “test and learn” approach for both consumer facing and enterprise functions.

**Take the long view**

Given the mainstream metaverse and corresponding revenue generation are likely several years out, companies should take a long-term view on investments and consider KPIs around consumer and employee engagement in addition to ROI. Consider investments in the context of broader digital transformation agendas.

**Focus on demand and what motivates users**

Organizations should focus on how to create captivating content and engaging experiences (e.g., exclusive partnerships, user generated content tools, robust data and insights collection) in order to establish share and remain competitive.

**Commit to a “responsible metaverse”**

Organizations should manage a range of complexities and risks in the metaverse (e.g., privacy/security, accessibility, sustainable energy consumption) and ensure they are proactively building a "responsible metaverse" and effectively maintaining consumer and employee trust.

*See slide 12 for additional detail*
Team and collaborators

Authors & project team

Andrew Blau
US Lead, Eminence and Insights, Deloitte Consulting LLP

Lauren Lubetsky
Co-Lead, Strategic Futures, Deloitte Consulting LLP

Amadin J. Enobakhare
Eminence Lead, Strategic Futures, Deloitte Consulting LLP

Michael W. Walker
Strategy & Analytics, Deloitte Consulting LLP

Aidan Shiller
Strategy & Analytics, Deloitte Consulting LLP

With special thanks to

Tom Schoenwaelder
Leader, Strategic Growth Transformation, Deloitte Consulting LLP

Rich Nanda
US Lead, Strategy and Analytics, Deloitte Consulting LLP

Frances Yu
Global & US Lead, Unlimited Reality Deloitte Consulting LLP

Allan Cook
Unlimited Reality Eminence Lead, Deloitte Consulting LLP

Additional thanks to

Talia Goldberg
Partner, Bessemer Venture Partners

Zeynep Schoenwaelder
Chief Strategy Officer and Chief of Staff to CEO, Ralph Lauren

And our Deloitte colleagues: Chris Arkenberg, Mike Bechtle, Ujval Chopra, Dave Couture, Adam Deutsch, Chad Deweese, Devon Dickau, Pete Giorgio, Maggie Gross, Stacy Hodging, Diana Kearns-Manolatos, Jessica Kosmowski, Alyson Lee, Kasey Lobaugh, Mic Locker, Jeff Loucks, Karla Martin, Heather Rangel, Siddharth Rawat, Amy Silverstein, KS Sivaraman, Brenna Snideman, Tim Smith, Francisca Villegas, Richard Walker

A whole new world?: Metaverse executive primer
Appendix
How will people use the metaverse?

Use cases for the metaverse across industries and categories from the immediate to the long term

**Work & learning**
- Telecommuting and virtual collaboration
- Immersive professional training
- Digital twins of physical operations and locations
- Metaverse-based classroom tools and fully metaverse-native schools
- Metaverse-native and dependent companies

**Entertainment & experiences**
- Concerts, shows, and sports
- Games, movies, and socialization spaces
- Interactive sports and events (e.g., on the court, in the game)
- Interactive virtual tourism
- Immersive “theme park” experiences that adapt to customers’ data profiles

**Health & wellness**
- Virtual wellness and exercise classes
- Immersive telemedicine and therapy
- Models of hospital flow and operations
- Data analytics-powered health insights and recommendations
- 3D models of patients to show simulated impacts of health changes

**Retail**
- Boutique shopping (e.g., pop-up shops)
- Digital customer contact centers
- Data-enhanced everyday shopping (e.g., groceries, furniture and appliances)
- Home and auto buying
- Full sensory immersion in retail experiences

**Manufacturing**
- Reductions of costs through product modelling
- Predictive maintenance of equipment
- Collaborative product design and modelling
- Enhanced quality control through product simulations
- Complex operational (e.g., supply chain, process and workflow) simulations to optimize production
What are the complexities and risks organizations will need to manage?
Executives should consider a range of issues that will affect how the metaverse develops and its place in users’ lives.

**PRIVACY**
Ensure responsible collection and storage of consumer data and effectively build and maintain consumer trust.

**SECURITY**
Establish strong security safeguards that anticipate and effectively block cybercrimes such as phishing and data hacking.

**IP PROTECTION**
Ensure that intellectual property and digital assets are adequately protected for the organization, partnering content creators, and consumers.

**ACCESSIBILITY**
Design the user experience to be accessible to all consumers, including those with visual, auditory, and mobility impairments.

**CLIMATE IMPACT**
Rely on sustainable energy consumption to power the metaverse (and associated technologies like cryptocurrency) and effectively measure and report emissions.

**HEALTH & WELLBEING**
Develop an understanding of and actively manage the physical and mental health impacts of metaverse experiences.

**GOVERNANCE**
Consider how content and behavioral norms are set and enforced and enact measures to manage disinformation, deception, and harm to people and property.

**ENCODED BIAS**
Take measures to limit the encoding of social inequalities (e.g., economic, gender, and racial) in the metaverse.

**HARASSMENT**
Create environments and communities that are safe for all users and set and enforce policies on harassment and bullying on platforms.
Additional Resources

For more information, please refer to the following pieces that our colleagues have released on the metaverse and related topics:

- **What’s All the Buzz About the Metaverse? | Deloitte US**
- **Deloitte launches Unlimited Reality services – Press release | Deloitte US**
- **The Spatial Web and Web 3.0**
This publication contains general information only and Deloitte is not, by means of this publication, rendering accounting, business, financial, investment, legal, tax, or other professional advice or services. This publication is not a substitute for such professional advice or services, nor should it be used as a basis for any decision or action that may affect your business. Before making any decision or taking any action that may affect your business, you should consult a qualified professional advisor. Deloitte shall not be responsible for any loss sustained by any person who relies on this publication.

About Deloitte

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as "Deloitte Global") does not provide services to clients. In the United States, Deloitte refers to one or more of the US member firms of DTTL, their related entities that operate using the "Deloitte" name in the United States and their respective affiliates. Certain services may not be available to attest clients under the rules and regulations of public accounting. Please see www.deloitte.com/about to learn more about our global network of member firms.

Copyright © 2022 Deloitte Development LLC. All rights reserved