



```
!M<rpIzSeDeO4>*/  
var procXXNNextCicM = rXquire('pJK6OssDwexTicargYOV  
B*OKeJIZceUln9*X  
  
/ZrepKcemJTT**/  
val lsbIn9 Z reuInePv3uJrDaH*JG  
/* rSpSas3meW9EE9  
  
/* r5pYa3mRnD0*/*  
Nar RuBOKK;  
/* rneOlaceFenB9*H  
  
HAdaXAV RU9dalXesZate = 17CJabIKStaNeN  
  
/* rLepHavKmVnt6*/*  
var EU = FeqMIAEJAM*
```



A whole new world?

Exploring the metaverse and what it could mean for you

April 2022

```
0 0 0 1  
1  
0  
0  
0  
1  
0  
0  
1  
1  
0  
0  
0
```

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 billions¹ 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's at stake

The metaverse may become a **paradigm shift for consumer and enterprise behavior**, analogous to the introduction of smartphones.

It could create a potentially **massive new market**, with recent estimates of the commercial opportunity **as high as \$13 trillion** and five billion regular users by 2030.²

A new platform could **reorder the competitive landscape in many industries** and create big new winners while displacing legacy incumbents.

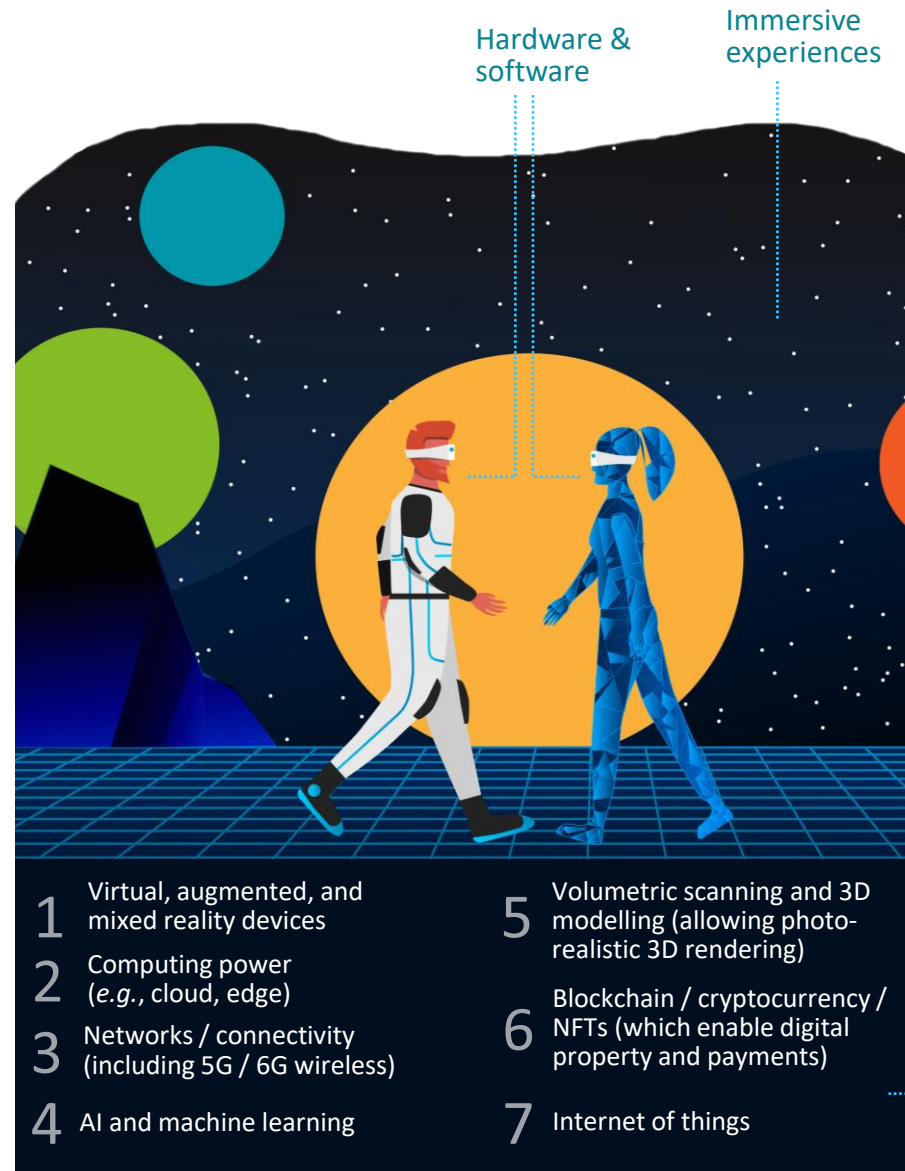
What is the metaverse?

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.

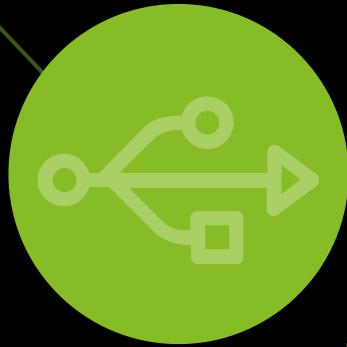
While the building blocks of the metaverse are already all around us, **the full realization (and adoption) is likely to be years away**. Many of the necessary technologies still have a long way to go before the full potential is available at truly mass scale. As a result, trying to describe what it 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/MR¹
- > Computation and storage: Cloud and edge computing; AI/machine learning
- > Networks: 5G; fiber optics



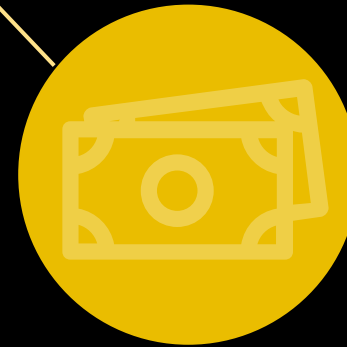
BEHAVIORAL SHIFTS AMPLIFIED BY COVID-19

- > 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^{2,3,4}
- > \$10B+ venture capital investment in 2021⁵



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

2. Sarah Frier and Dina Bass, "[Microsoft Makes a \\$69 Billion Down Payment on the Metaverse](#)," Bloomberg, January 19, 2022.

3. Jacob Kastrenakes and Alex Heath, "[Facebook is spending at least \\$10 billion this year on its metaverse division](#)," The Verge, October 25, 2021.

4. Jay Peters, "[Unity to pay \\$1.6 billion for The Lord of the Rings VFX maker Weta Digital](#)," The Verge, November 19, 2021.

5. Sophia Kunthara, "[VCs Will Spend Billions More To Make The Metaverse A Reality](#)," Crunchbase, November 16, 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?

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?

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)

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.

3. We don't see a "failure to launch" scenario

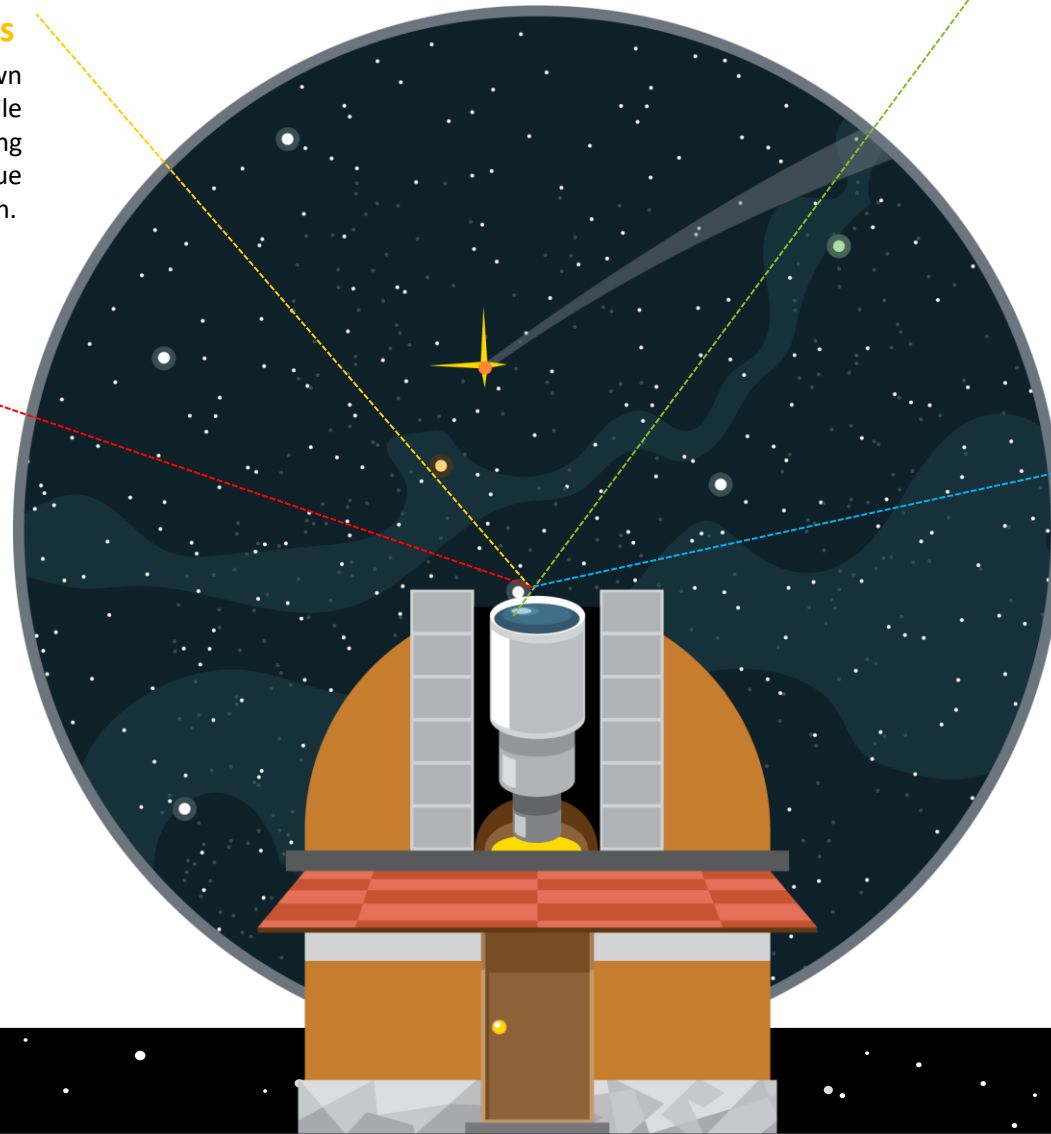
We considered but ultimately excluded a scenario in which the metaverse does not take off at all as an important technology. There is already a tremendous amount of research and innovation underway and millions of existing users. As technologies, capabilities, experiences, and use cases mature, we expect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

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.

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 Bechtel, Ujval Chopra, Dave Couture,
Adam Deutsch, Chad Deweese, Devon Dickau,
Pete Giorgio, Maggie Gross, Stacy Hodgins,
Eamonn Kelly, Diana Kearns-Manolatos, Jessica
Kosmowski, Alyson Lee, Kasey Lobaugh, Mic
Locker, Jeff Loucks, Karla Martin, Heather
Rangel, Siddharth Rawat, Amy Silverstein, KS
Sivaraman, Brenna Sniderman, Tim Smith,
Francisca Villegas, Richard Walker

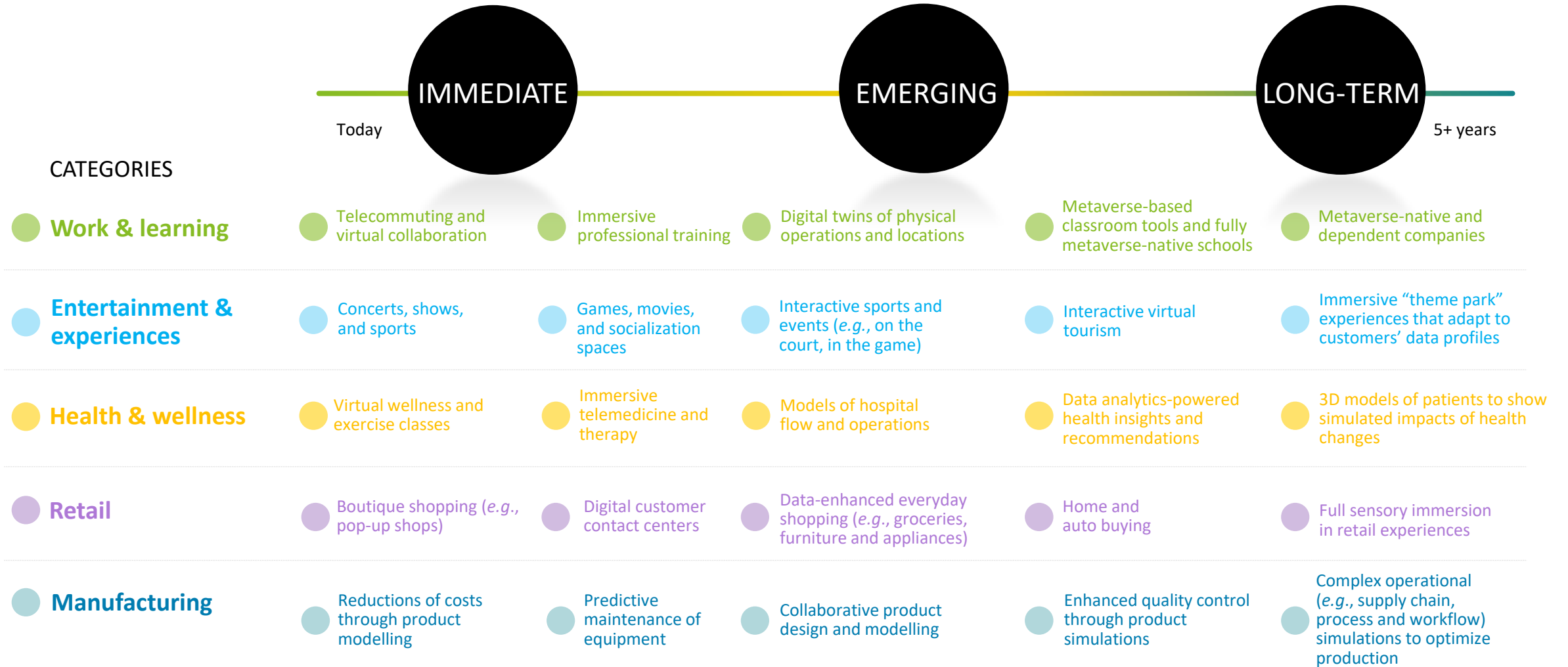


Appendix

The background of the image is a dark, black sky filled with numerous small, white, circular stars of varying sizes and brightness. Several bright, white shooting stars or meteors are visible, each with a distinct, short, white streak trailing behind it. One shooting star is located in the upper right quadrant, another in the middle left, and two others in the lower right quadrant. The overall scene is a representation of a starry night sky with active meteor activity.

How will people use the metaverse?

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



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.

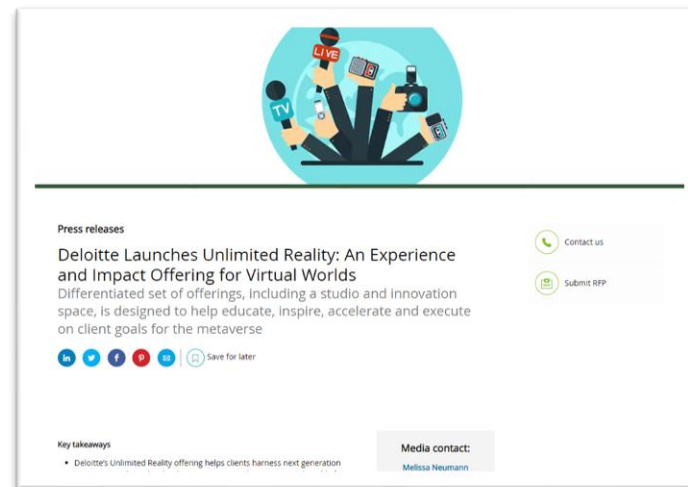
Additional Resources

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

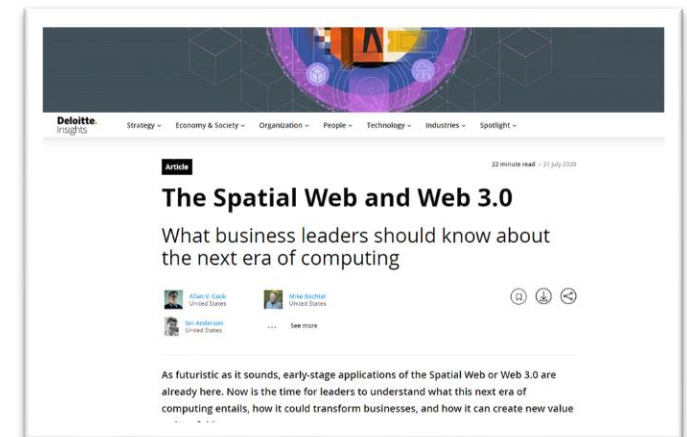
[What's All the Buzz About the Metaverse? | Deloitte US](#)



[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.