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It’s too big to ignore—yet its future is far from certain. Companies need to dip a toe in the water and plan to take the plunge should developments warrant.

Suddenly, the metaverse is in the zeitgeist, for better or worse. Investment more than doubled in 2022 powered by big moves (such as Microsoft’s $69 billion acquisition of Activision Blizzard, now under antitrust review) and small ones (about $12 billion to $14 billion of venture capital and private equity investment). Everyone has heard about the successes racked up by some big gaming companies: Roblox reported more than 58 million daily active users in 2022,[1] while Fortnite had more than 20 million in 2020 and generated more than $9 billion in sales between 2018 and 2019.[2] And others are investing; Meta continues to spend at least $10 billion annually on metaverse development. Yet investors are asking questions of metaverse companies about when they can expect tangible, near-term results from these companies’ investments.[3]

How should CEOs view the metaverse? Is it a big opportunity or a big risk? Our answer: the opportunity is enormous—and the risk is not what you think it is. The companies that are building the metaverse see it as the next iteration of the internet (see this *McKinsey Explainer* for more). And as with any technology so vast and all-encompassing (it’s similar to AI in its scope), the potential is enormous. We estimate that the metaverse could generate $4 trillion to $5 trillion in value by 2030; see our report for all the details.

On the other hand, there are clear risks. Don’t be distracted by the debacles in crypto and nonfungible tokens (NFTs); those are Web3 technologies that are related but not exactly the same as the metaverse. Rather, the biggest risk is missing the wave of change that breakthrough technologies such as the original internet, AI, and the metaverse can unleash. In our April 2022 survey, some 95 percent of business leaders expect the metaverse to have a positive impact on their industry within five to ten years, and 61 percent expect it to change the way their industry operates.

In this article, we’ll briefly summarize the reasons for optimism and the factors that suggest the metaverse is truly a CEO issue. We’ll also look at the significant obstacles that will have to be overcome if the metaverse is to realize its full potential. We’ll conclude with a suggestion of three steps that CEOs in several sectors—both consumer and enterprise—could consider to make sure the metaverse train, if and when it gets going, does not leave the station without them.

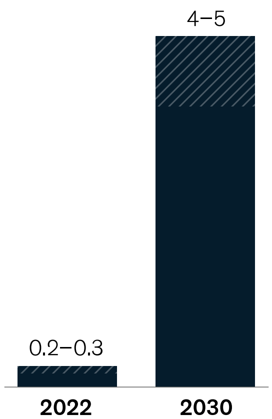
The case for optimism

When we estimated the market value of metaverse activity in June 2022, we calculated that it was between $200 billion and $300 billion. It’s larger now, and in eight years or so, it could be $4 trillion to $5 trillion (exhibit), which is roughly the size of Japan’s economy, the third largest in the world. Exponential growth is possible because of an alignment of several forces: the metaverse’s appeal spans genders, geographies, and generations; consumers have already shown they are ready to spend on metaverse assets; they are open to adopting new technologies; companies are investing heavily in the required infrastructure; and brands experimenting in the metaverse are finding that customers are delighted.

Exhibit

By 2030, the metaverse could generate $4 trillion to $5 trillion across consumer and enterprise use cases.

Metaverse revenue estimates, $ trillion



Relative 2030 use case potential

	Low	Medium	High
Consumer use cases	digital media health and fitness virtual assets VR/AR[1] hardware	ads education gaming live entertainment	e-commerce
Enterprise use cases	central government construction consumer services insurance investment local government resource industries utilities	education/training healthcare provider transportation wholesale	banking discrete manufacturing media process manufacturing professional services retail telecommunications

[1]Virtual reality and augmented reality.
Source: McKinsey analysis

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The sheer scale compels CEO attention. As the old saying goes, a billion here and a billion there, and pretty soon you're talking about real money—and $5 trillion is a lot of billions. For context, we estimate that the road to net zero will require $3.5 trillion in annual spending and that the ongoing shift to the cloud holds an opportunity for an additional $3 trillion.

The number we've put on the metaverse's potential is so large because the metaverse is a combinatorial technology: it combines elements of many of the top trends that the McKinsey Technology Council identified this year as most promising, including AI, immersive reality, advanced connectivity, and Web3. That's the main reason CEOs should be interested; another is that the metaverse touches on many parts of the enterprise. The CEO is the natural integrator who can marshal the company's resources to put together a coherent, value-driven response. And with the CEO's support, there's less chance that the metaverse effort gets stuck in "pilot purgatory."

Two leading uses

As the exhibit suggests, we built our value-creation estimate by thinking through the emerging uses of the metaverse for both consumers and businesses. Soon, companies will likely offer customers an unprecedented shopping experience in the metaverse; effectively, it will be a 3-D e-commerce channel. For now, to get a sense of the potential, consider two of the largest and more advanced uses, one for consumer businesses and one for B2B companies:

- *Brand marketing and consumer engagement.* Many companies have already added the metaverse to their omnichannel marketing mix, staking out a presence in virtual worlds like Roblox, Fortnite, and the Sandbox. Some are already finding success. Nike has hosted more than 26 million visitors at Nikeland, its space in Roblox, and it has sold over $185 million of NFTs for digital sneakers and suchlike products.[4] And its digital division has tripled revenues to exceed $10 billion, almost a quarter of the company's total.[5] Now, companies are moving into the next wave of opportunities, including gamification, virtual reality (VR), and augmented reality (AR).

  Starbucks Odyssey, the metaverse upgrade of the company's already strong loyalty program, is uncovering the potential for gamification. The company already had a big rewards program. Odyssey adds a new layer: members can now take virtual tours of coffee farms, play a trivia game about Starbucks's heritage, and play another game called *Starbucks for Life*. Points earned unlock new experiences, such as virtual instruction in making an espresso martini or even a trip "IRL" to Hacienda Alsacia, a coffee farm in Costa Rica. (Ask your teenagers what IRL means, if you dare. For those who don't have an in-house source of insight and sarcasm, it's "in real life.")

  Amazon has added AR features to its apps, letting customers see what a product looks like in their own homes. IKEA does something similar, letting customers build a 3-D makeover of their home using AR tools.

- *Digital twins.* In the metaverse, every asset, process, or person within and related to an enterprise can be replicated virtually—and connected. As a result, nearly every aspect of work can take place digitally before it does so physically. By building digital twins—virtual replicas of physical settings and objects in a metaverse that generate data in real time—far richer analyses can be generated to enable improved decision making. AB InBev built a digital twin of its supply chain and manufacturing; the tool allows adjustments to the brewing process based on active conditions and helps avoid production bottlenecks. Siemens did something similar in its factory in Nanjing. It built a digital twin of the factory before breaking ground, avoiding mistakes that had been costly in the past. The company says that the digital twin doubled manufacturing capacity and also helps with steady-state operations, improving productivity by 20 percent. BMW, Renault, Hyundai, and many other automakers are also creating value through digital twins. Even professional athletes are using it: Emirates Team New Zealand won the most recent America's Cup in part through an innovative digital twin.

More enterprise uses are emerging all the time as companies get creative. Corporate training is fertile ground. Bank of America has launched an immersive training program using VR for every financial center in its network, teaching bankers how to strengthen relationships with clients, navigate difficult conversations, and practice empathy.[6] Walmart found an unexpected use: the company says its VR training helped save lives during a difficult situation at one of its stores.[7]

A long way to go

Skeptics note that other technologies have sometimes taken a surprisingly long time to arrive at their commercial potential. AI is one; even after a decades-long "AI winter," many analysts believe that AI still has not reached its potential, though the recent advances in generative AI are bringing many skeptics around.[8] Autonomous vehicles are another.[9] Isn't there a risk that the metaverse will suffer a similar fate? Put another way, where are we on the hype cycle? Peak of inflated expectations? Or headed into the trough of disillusionment?

In our view, the development of the metaverse is a few years away from a true tipping point. It could easily take longer (though that's no reason not to prepare). As Brian Solis of Salesforce shared with us recently, generational changes like Web 1.0, social media, and mobile "rarely happen overnight. They take years and are the result of an accumulation of incremental technological advances, evolving consumer demand, and cycles of experimentation." That seems an apt description of the hurdles that the metaverse must overcome. The technology is not yet ready to support the metaverse at scale: advances in 5G networks, edge computing, hardware, and software must come online (they're in progress). At the moment, audiences are primarily gamers and the technically savvy; others must be recruited (our surveys suggest they're very interested). Many metaverse transactions are made in cryptocurrency; we've all seen the shortcomings of crypto as a reliable, safe system of exchange. Finally, there is no connection among all the various partial metaverses (Roblox, the Sandbox, and many others). The integrated or true metaverse is a long way off.

What CEOs could do now

Both the optimists and the skeptics have solid evidence to support their views. But the balance of evidence may slightly favor the optimists. Seventy-one percent of the 79 largest consumer firms globally have already put down stakes in the metaverse. The rest are running the risk of being caught without a plan. Companies in other industries are watching carefully and making plans; very few will be untouched by the metaverse. It may seem an odd economic moment to invest even a little bit in the metaverse. But our research strongly suggests that in a downturn, companies that tune up their balance sheet and invest in growth capture dominant positions throughout the next cycle.

The metaverse plan will depend on the company's sector. As shown in the exhibit, the metaverse has the most potential to upend sectors such as banking, manufacturing, media, professional services, retail, and telecommunications. CEOs in these industries could consider taking more assertive steps than others. But CEOs in any sector can take three steps to ensure they have a reservation on the train and position their companies well for the metaverse's eventual takeoff.

- *Start with the "why."* The key question is less "what can we do in the metaverse?" and more "why does the metaverse fit into our growth and innovation agenda?" CEOs need to figure out how the metaverse factors into the current business model and what the company's customers are excited to do in the metaverse. As Rob Lowe, formerly of LEGO Ventures, told us, "Don't try to alter your core objectives to fit into the metaverse."
- *Get practical: find the "what."* It's good to look externally for inspiration, but CEOs also should consider identifying and prioritizing practical use cases that suit the company's strategy and then develop the concepts, business cases, and road maps for those use cases. CEOs should treat these efforts with the same gravitas they would use for anything else, and not as a gimmick or a flyer. Understanding that this is a serious effort will help dispel organizational skepticism.
- *Champion the cause: the "how."* The CEO can perform two functions: first, set the vision; second, choose leaders for each use case and initiative. Functional leaders might take the lead on these to ensure that the initiatives are closely embedded in functional agendas; it may also make sense to have one person champion the efforts on behalf of the functions. Several companies, including L'Oréal, have already

appointed a chief metaverse officer, often reporting to the CEO. Top leaders might also think about the operating model and team setup required. Many companies will want to partner with specialist providers for hardware, software, and metaverse-related development services (such as VR design and development or game engines). Testing and learning—and asking the right questions along the way—are essential to bridging the gap between expectations and results.

With the real world beset by problems (such as war, COVID-19, inflation, and inequality), the metaverse offers an escape. That's probably part of the attraction for the millions of customers who are flocking to early-stage metaverses. CEOs should ensure they are meeting their customers where they live—both virtually and IRL.

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