



## Four Visions of the Metaverse

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**As first movers shape the architecture of the metaverse, company leaders need strategies to prepare for different outcomes.**

The **metaverse** may be in its infancy, but major players are already placing big bets. In October 2021, Meta revealed a \$10 billion investment in its virtual reality lab segments.<sup>1</sup> In January 2022, Microsoft announced its acquisition of Activision Blizzard, a major video game publisher, for a little less than \$70 billion.<sup>2</sup> And as of October 2022, the online gaming platform and gaming creation system Roblox has raised close to \$900 million in funding.<sup>3</sup>

These and other “constructor” companies are vying to shape the architecture of the nascent **metaverse industry** by creating the conditions that will favor their success. What’s more, they are defining the sources of value for metaverses and what the balance of power among the different players might be. They will also shape how traditional

companies looking to provide content or experiences through metaverses and capture value will benefit.

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Companies are vying to shape the architecture of the nascent metaverse industry.

The stakes are high for traditional companies—their leaders can’t wait on the sidelines. To make the right

investment decisions, they’ll need to understand the multiple visions being constructed. For each, they’ll need to track the momentum building and consider how it aligns strategically with their company. With this information, they’ll be able to choose where and how to engage.

## Envisioning the Future

To better understand the forces at play, we conducted a natural language processing analysis of the latest C-level public announcements and white papers published by five of the biggest metaverse players: Axie Infinity, Meta, Microsoft, Roblox, and The Sandbox. Based on the key words and phrases they are using to tell their metaverse stories, the degree of vertical integration of the different metaverse layers (hardware, platform, and content), and our experience working with technology firms, we see four competing visions emerging.

**The Complete Control Model.** In this vision, a few specialized metaverses will serve specific purposes, such as gaming and working, and hardware and software will be used as proprietary entry points to lock in users. The platform constructors are the companies providing high-quality content and use cases as well as the

requisite hardware. For example, Microsoft designed office-productivity AR tools for its new platform Mesh, and AR/VR hardware and software startup Magic Leap created an application that allows surgeons to plan procedures in immersive 3D environments. In our analysis, we found that complete control model companies are promoting *holographic experiences* at the intersection of *virtual and reality*.

Constructors are betting that quality and tailored experiences will be key to driving metaverse adoption versus the number of experiences or the possibility of users creating content themselves. They believe the high level of investment needed to create metaverse experiences will erect entry barriers to new players unable to develop the hardware or software to compete. This gives these constructors the ability to dictate pricing across all metaverse layers and choose the business models most beneficial to them. These models might resemble those already used today, such as Microsoft's SaaS offer of Office, and Magic Leap's bundled hardware and services sales.

**The Infrastructure Control Model.** In this vision, several all-in-one metaverses serve multiple purposes; constructors in this space often refer to their metaverse as *one world*. Hardware will be a proprietary entry point to lock in users, but users can easily switch from one content provider to another—much like people can navigate among apps on a smartphone. For example, Meta is constructing a metaverse that resembles an immersive social media tool. The company is leveraging its proprietary VR glasses and counting on users and companies to be key contributors to content production. It is putting *creators* at the core of its communications while offering all the infrastructure needed to develop that immersive and high-tech content. Meta wants to develop an ecosystem in which advancements in technology (such as improved VR glasses) rarely benefit other platform builders due to tech specificities.

In Meta's vision, the high level of investment needed to create state-of-the-art VR hardware and network effects provided by its large content producer base will be the entry barriers that will ensure the industry becomes a natural monopoly. These constructors will want to tap into attention economy business models, like ad-

based models, and capture transaction revenues made on their platforms. In fact, Meta announced that is planning to take a cut on all transactions made on its metaverse platform, as well as potential patents that show its intention to monetize metaverse advertisement.<sup>4</sup>

**The Content Control Model.** In this vision, constructors control the platform and content but need to rely on providers for hardware. It resembles the streaming industry of today, where platforms like Netflix and HBO can be easily accessed from any screen-based device. The difference will be that only the constructors will choose (and at times develop) the content. Less than creating a new industry or platform, this vision looks like a monetized expansion of the gaming industry, with selected content and experience providers and **new business models based on blockchain**. In fact, the most commonly used words by players in this vision are related to gaming (*game* and *player*) and the digital economy (*blockchain*, *token*, and *asset*). Several metaverses would coexist if this vision scales, and constructors would need to find ways to become competitive content providers.

For example, players like Axie Infinity, Epic Games, Sorare, and The Sandbox are creating metaverses based on innovative experiences or virtual entertainment opportunities. These metaverses revolve around their own digital economy. Similar to game developers, these players do not rely on high-end technology like VR to differentiate themselves. They do not need to construct a large ecosystem of contributors to provide content and strengthen their offer. Instead, they are directly constructing (sometimes through selective and profitable partnerships) the experiences or games that users can access in their metaverses, adapting the underlying technologies to reach a broader audience.

**The Platform Control Model.** In this final vision, several metaverses would coexist. Software becomes the only proprietary entry point, with constructors needing to improve user experience and create soft barriers to retain users. Constructors in this space often promote their commitment to *community*, *friendship*, and *communication*. Metaverses might be potentially interoperable (just like you can easily post videos from Instagram to TikTok), with users and

contributors easily creating experiences across platforms. Constructors are expected to capture value through a multitude of business models, such as transaction fees, ad-based models, or digital assets valorization.

For example, players like virtual platforms Decentraland and Roblox rely mostly on generic or open-source technology, such as screen-based hardware or blockchain, and want to make their community of users the key providers of content, such as digital events. Although each platform is still built on proprietary software, these players are constructing a shared ecosystem of providers, such as content producers and blockchain developers, which they describe as *public worlds*. Technological advancements might benefit the entire ecosystem—even competitors. In this vision, constructors become mainly platform managers, much like today's social media platforms, which can be accessed through any hardware and where users are the key content providers.

## Monitoring Momentum

The above visions are the most likely scenarios for how metaverses will take shape. The imperative for companies who seek to compete in these spaces is to start monitoring the key trigger points that will determine whether a particular vision has enough momentum to become reality. The three trigger points companies need to pay attention to are technology, regulation, and adoption.

On the one hand, the complete and infrastructure control model visions will be highly dependent on the maturation of VR technology, and whether the entry point to metaverses will become specialized high-end hardware. On the other hand, the creation of easy-to-use content development tools will be a key turning point for the infrastructure and platform control model visions. Finally, the development and maturation of decentralized technology, such as blockchain, might become a basis for the economy underlying the content control model vision or the interoperability needed to boost the platform control model vision.



The regulatory environment remains unclear but will have far-reaching implications. For example, the creation or absence of standards on tech layers can directly impact

constructors' plans. A lack of

regulation of standards for

VR hardware might favor

complete and infrastructure

control model visions,

whereas the enforcement of

standards to ensure

metaverses are accessible

from any hardware will boost platform and content control model visions.

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Finally, companies should monitor which long-anticipated “killer use cases” will first emerge and drive mass adoption. For example, if highly tailored B2B use cases win, the hardware control model vision will be favored. If social use cases drive adoption, the infrastructure lock is more likely to come to fruition. And if use cases linked to entertainment or digital economy become stronger, the platform and content control model visions will have an edge.

## Looking for Alignment

It's not only the strength of the vision itself that companies must consider. It is also critical that they understand how that vision aligns with their strengths and positioning.

For example, in the complete control model vision, companies will face direct competition with the constructors' content and may see limited opportunities to contribute. Those with strong strategic alignment with this vision are B2B companies that lead their sector and have the tech talent needed to co-construct a premium offer that can attract both customers and constructors. They will need to negotiate with constructors to co-create specialized offers. For example, John Deere enables its clients to interact with its products through its AR app. In the complete

control model vision, they could partner with a constructor like Magic Leap or Microsoft to scale their current offers through their metaverse and co-develop use cases specific to the industrial equipment market.

If the infrastructure control model vision comes to fruition, the quality of experience will be so advanced that companies will have to be in the metaverse to deliver their services—just as companies need to have an e-commerce channel. Companies that have a strong strategic alignment with this vision and will most benefit are likely to be the B2C players that can rely on their strong brand to attract clients and that would benefit from high-quality immersive experiences to build a premium offer. For instance, French department store Printemps recently created its own small metaverse featuring an immersive 3D replica of its flagship store where customers can purchase best sellers and exclusives as well as browse an NFT art collection. Because customers will be unlikely to switch from one metaverse to another, companies will have to choose multiple metaverses in which to play (and thus invest) if they want to capture the largest share of clients, giving an advantage to organizations with ample available capital.

In the content control model vision, most companies will have limited or almost no power to create value on their own terms. Those with strategic alignment with this vision are B2C companies with strong positioning and brand in their sector to be able to negotiate with constructors to provide and co-create offers that attract and retain users

in a partnership setup. For example, Marvel has a multiyear partnership with Fortnite to promote its films by developing characters, skins, digital locations, and complete experiences for the game.

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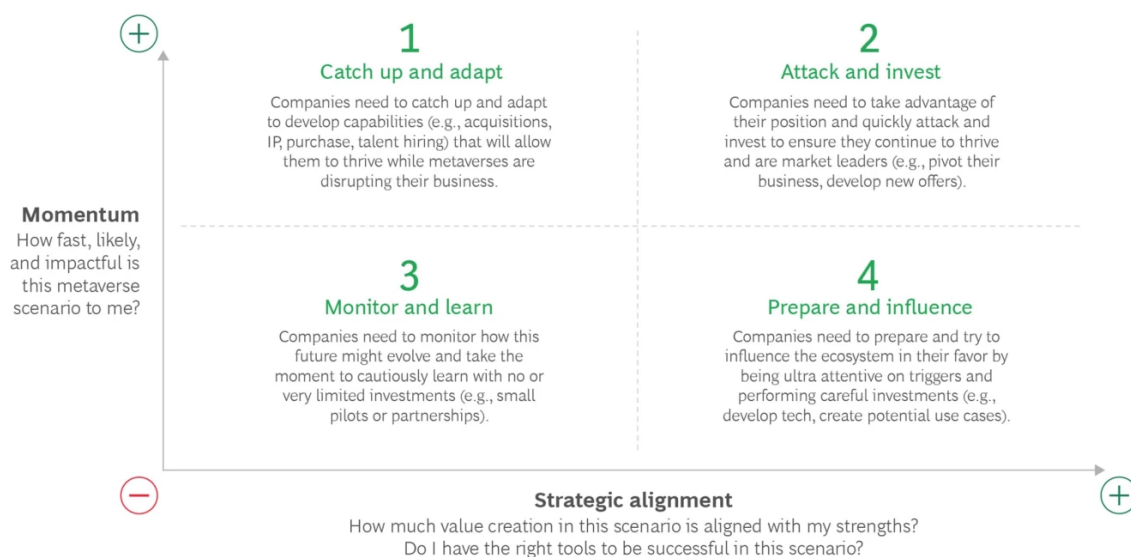
Companies with a strong strategic alignment are not necessarily those with well-known brands but ones that can create innovative offers.

Finally, in the platform control model vision, contributors would be highly valued by constructors as key to attracting and retaining users and thus would have the autonomy to choose the optimal business model and platforms that offer the lowest cost to play. However, companies will find themselves in a very competitive market where content development tools are easily available and even users can directly compete with them to provide experiences. For example, today Roblox counts more than 40 million experiences on its platform.<sup>5</sup> Companies with a strong strategic alignment are not necessarily those with well-known brands but ones that can create innovative offers. Companies of all sizes will be able to benefit from this vision. Those with capabilities to deeply understand and quickly adapt to new customers' needs will have an advantage.

## Choosing Your Metaverse Strategies

The combination of momentum and strategic alignment reveals four strategies that companies should choose from. (See the exhibit.)

### How to Identify the Right Metaverse Strategies



Source: BCG analysis.

They are:



1. *Catch-up and adapt.* Companies with weak strategic alignment to a vision that has strong momentum need to quickly develop capabilities to adapt while carefully choosing their investments and actions. For example, Nike acquired RFTKT, a digital sneakers NFT startup, to gain capabilities that would be useful for the platform control model, where it would be a key provider of the content.
  2. *Attack and invest.* Companies with strong alignment to a vision that has strong momentum will be able to take advantage of their position and quickly attack through massive investments. They should make bold moves to give them the upper hand, such as completely creating new business lines or performing major M&As. For example, Qualcomm, recognizing the urgency of the infrastructure and complete control models, has created a new business line of semiconductors only for VR applications.
  3. *Monitor and learn.* Companies with weak strategic alignment to a low-momentum vision should carefully monitor how that vision evolves. They can learn through small partnerships or pilots that require minimal investment. For example, take Ferrari and the content control model vision. By partnering with Fortnite, it created a digital experience through which users can “drive” one of its cars in the game.
  4. *Prepare and influence.* Companies with strong strategic alignment to a low-momentum vision need to leverage their position to try to influence the ecosystem in their favor by being ultra attentive to triggers and making careful, long-term investments. For example, Amazon, without committing to any current metaverse, is quietly preparing for multiple visions by testing different use cases, for example, through AR-based B2C services like Amazon View or gamified virtual experience like AWS Cloud Quest. It has also hired senior leaders to oversee new metaverse content, digital assets, and AR/VR hardware departments.
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It remains unknown which vision of the metaverse will prevail or if several might coexist. But companies that want to compete in the metaverse can't wait for the future to unfold. They need to constantly assess the environment as it evolves—and adjust their strategies accordingly.

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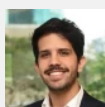
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- 1 “Facebook Is Spending at Least \$10 Billion This Year on Its Metaverse Division,” The Verge, October 25, 2021, <https://www.theverge.com/2021/10/25/22745381/facebook-reality-labs-10-billion-metaverse>.
- 2 “Microsoft to Buy Activision in \$68.7 Billion All-Cash Deal,” CNBC, January 18, 2022, <https://www.cnbc.com/2022/01/18/microsoft-to-buy-activision.html>.
- 3 “Roblox,” Crunchbase website, accessed October 2022, [https://www.crunchbase.com/organization/roblox/company\\_financials](https://www.crunchbase.com/organization/roblox/company_financials).
- 4 Meta Plans to Take a Nearly 50% Cut on Virtual Asset Sales in Its Metaverse,” CNBC, April 13, 2022, <https://www.cnbc.com/2022/04/13/meta-plans-to-take-a-nearly-50percent-cut-on-nft-sales-in-its-metaverse.html>; “Facebook Patents Reveal How It Intends to Cash In on the Metaverse,” Financial Times, January 17, 2022, <https://www.ft.com/content/76d40aac-034e-4e0b-95eb-c5d34146f647>.
- 5 “How Many Games Are in Roblox in 2022?” EarthWeb, August 2, 2022

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