Gaming Industry
Survey 2022

What's possible for the gaming industry in the next dimension?

The better the question. The better the answer. The better the world works.

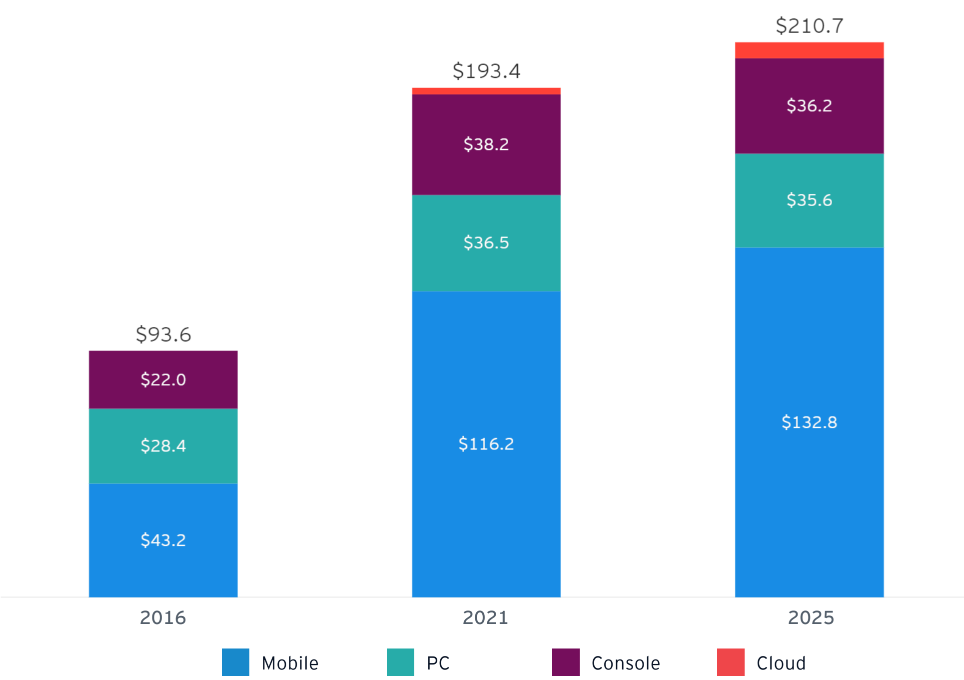
Gaming companies are entering a new dimension, no longer bound by place, time or physical reality

Since its inception decades ago, the video gaming industry has grown with stunning speed. Over the last five years in particular, it has experienced significant expansion as users worldwide play games of all types across a variety of platforms. Video gaming is also on the verge of a major transformational shift due to the emergence of the metaverse — a shared, persistent, three-dimensional (3D) virtual realm where users interact with objects, the environment and each other through digital representations of themselves or avatars. While many believe that the metaverse will eventually be pervasive throughout society, including in the business world and on social media, gaming has quickly become a first mover in this space. With this in mind, we recently surveyed a group of executives from leading gaming companies to gain their insights about the impact of and outlook for the metaverse.

The state of the gaming industry

An estimated 2.9 billion people — more than one out of every three people on the planet — played a video game in 2021,[1] when global revenue for the industry exceeded $193 billion (see Figure 1). In addition, from 2016 to 2021, gaming grew at a compound annual growth rate of 15.6%.[2]

Figure 1: Global video game content revenue by platform ($b)



Content revenue includes physical and digital copies of full games, as well as expansion content, digital currency, in-game items and subscription services. It does not include hardware.

Sources: S&P Global Market Intelligence; EY analysis.

Experience the interactive chart

The video gaming industry also saw a considerable boost in 2020 and 2021 due to the COVID-19 pandemic, which forced people to stay home and utilize connected technology to access entertainment and to socialize. While this industry momentum appears poised to continue, global gaming revenue growth rates are expected to slow in 2022, as the industry faces difficult year-over-year comparisons, chip shortages slow the delivery of gaming devices and society "reopens" as pandemic restrictions fade.

By 2025, the gaming industry is expected to generate an estimated $211 billion in revenue, with mobile gaming contributing $116 billion.

Nevertheless, the favorable demographics (e.g., the participation of more female gamers), evolving technology and community-building nature that underpinned the industry long before the pandemic have not changed. By 2025, the gaming industry is expected to generate an estimated $211 billion in revenue, with mobile gaming contributing $116 billion.[3]

Amid the rapid growth of gaming, its basic drivers are still familiar: processors are getting faster, improving graphics and the overall gaming experience. Console makers are also launching new hardware with better capabilities and offering more exclusive game titles. Moreover, global internet availability will continue to rise, enabling more people to play online games. Multiplayer games, mobile games and the population of casual gamers all are expected to continue to expand.

In addition, the rollout of 5G communication networks will greatly accelerate the uptake of mobile and cloud-based game delivery. Faster network speeds and reduced latency allow game developers more freedom in producing games because they are not confined by the limitations of hardware platforms. For players, this provides several new and exciting possibilities for gameplay that won't tether them to existing devices. In addition to driving cloud gaming, 5G will allow consumers to use virtual reality (VR) and augmented reality (AR) gear on the go, providing a far richer mobile experience. According to a recent EY report, the 5G investment outlook for the next year remains strong.

How the metaverse will impact the gaming industry

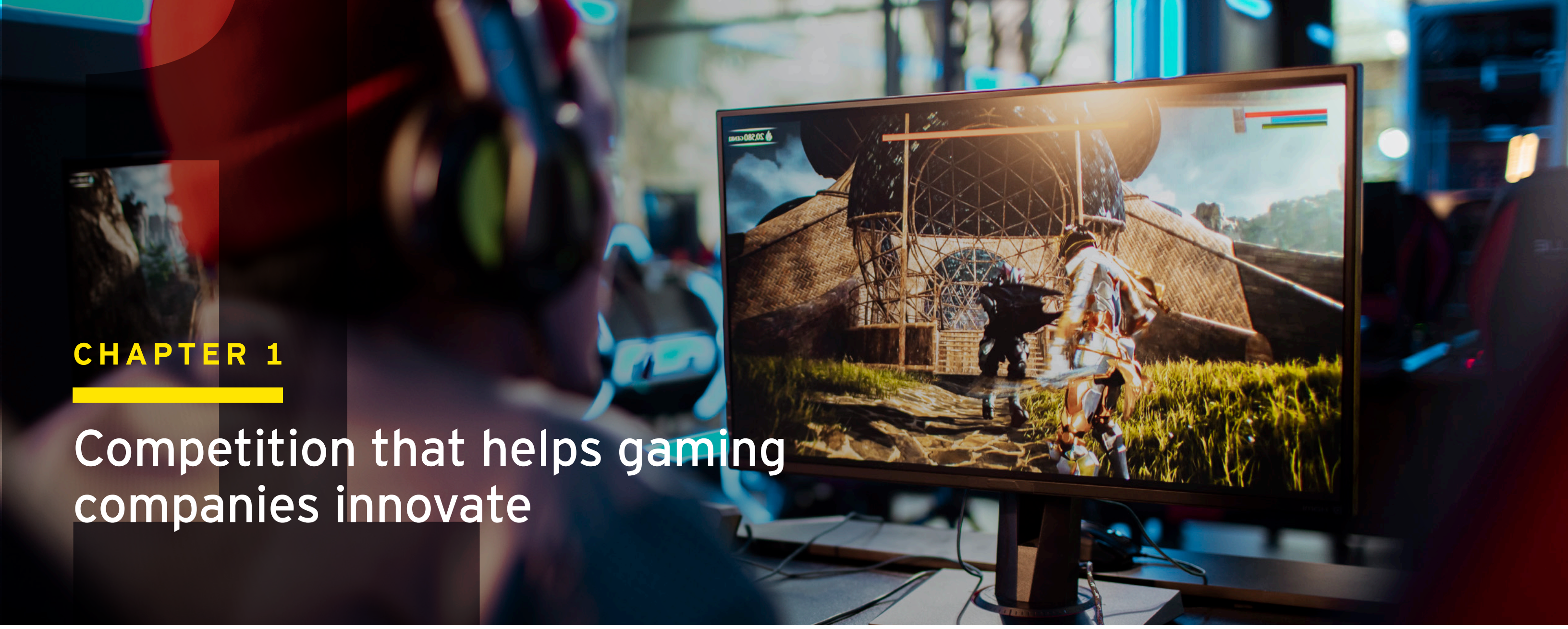
The concept of a new digital universe is not a new one. It was originally conceived in a 1992 dystopian science fiction novel in which people use avatars to interact with each other in a futuristic virtual world. Today, this fictional universe is becoming a reality, with a number of early adopting gaming companies experimenting with a metaverse presence and many others formulating strategies for their own entry. How vast will the economic opportunity of the metaverse be? According to one estimate, the global metaverse market is expected to reach $280 billion by 2025.[4]

Gaming titles will continue to compete with one another, but because each title is just one of many "realms" in the metaverse, they will also compete with a seemingly endless number of destinations and activities. This could lead to significant change in gaming companies' business models, the way they develop their products, the employee skill sets needed and even the way these companies are structured.

As it matures, the metaverse will continue to incorporate various technologies, such as VR, AR and 3D functionality. It is also associated with the decentralized Web 3.0 concept, which many view as the next chapter in the evolution of the internet. The metaverse will span multiple platforms, as well as the digital and physical realms. It will also create entirely new ways of interacting — and, for gaming companies, drive revenue.

Our survey on the metaverse and gaming industry

In late 2021, we teamed with a global economic forecasting firm to survey 200 of the gaming industry's leading participants from North America, Asia and Europe. The companies represented have annual revenues ranging from $20 million into the billions and cover the entire gaming value chain — from console makers and gaming platform companies to game publishers and technology suppliers. Respondents include C-suite members, directors, senior VPs, heads of strategy and chief product officers.



CHAPTER 1

Competition that helps gaming companies innovate

From the beginning, the gaming industry has been extremely competitive, and this pressure has intensified as the popularity of gaming has increased. The competitive landscape includes multibillion-dollar companies, but many small players have also launched wildly successful titles. Non-gaming companies are also seeking to enter the gaming world, with several technology and streaming giants recently announcing their intentions to enter the space.

When we asked gaming executives about their view of the competition, nearly three of four (72%) said increased competition within the sector is a moderate or significant opportunity. This favorable point of view was shared by several executives, regardless of the size of their company's revenue.

"Within the gaming space, competition for engagement makes our business grow. It creates innovation and new ideas," says Tim Stuart, CFO of Microsoft's Xbox." This market is growing because there are new entrants, there are new game players, and there is a flow of new content unlike anything we've seen in the past. The name of the game is getting gamers into the overall gaming ecosystem. We really believe a rising tide lifts all boats." Competition, says Stuart, sends a signal that gaming is worth pursuing.

$36b Value of announced or closed gaming deals in 2021

Competing in such a vibrant market requires gaming companies to have technical and artistic acumen, along with business and operational excellence. With customer expectations rising dramatically, a key pillar of success will be continuous innovation and product differentiation, and gaming executives clearly recognize this. For example, 83% of those surveyed say that the gaming industry is under constant pressure to innovate and create new gaming experiences.

How will this innovation come about? There has clearly been a trend in recent years for companies to use M&A to acquire talent, technologies and popular game franchises. In 2021, there were about 400 announced or closed gaming deals worth approximately $36.3 billion.[5] This trend was reinforced in January 2022, when Microsoft announced that it planned to acquire the gaming company Activision Blizzard for $68.7 billion. Yet, when asked to identify which activities would position them best to succeed in the next three years, just 16% of our survey respondents ranked M&A as a priority. This suggests an appetite for organic growth. Driving that growth will be a focus on developing and delivering new products and services. Indeed, 50% of the gaming executives we surveyed said they plan to increase funding for R&D in the next three years, while a similar number (44%) plan to invest in new technologies.

CHAPTER 2

Gaming data security and cyber risks

The challenges of capturing, utilizing and protecting data are certainly not new or unique to the industry. Gaming companies currently use data to better understand player behaviors, both on a specific platform or device and across them. This drives gaming companies' strategic investments and content strategies, enables them to personalize and redesign their games to make them more engaging, and allows them to create targeted in-game advertisements.

As more gaming data becomes available, gaming executives anticipate that this will bring new hurdles. In our survey, 32% said making use of the data their companies collect is a significant challenge today. By contrast, 41% said they believe data management will be challenging three years from now. In this environment, companies plan to revamp their data management skills. For example, 47% of survey respondents cited hiring new employees with advanced skills in data analytics as a top data-related priority.

In addition, gaming data will be increasingly generated through a growing number of devices along the gaming value chain. Fifty-nine percent of the gaming executives we spoke with ranked gaining visibility into gaming endpoints as their top data priority.

Another perennial challenge is data security. The growing amount of data collected by gaming companies makes them attractive targets for cyber criminals who seek financial gains or simply want to execute malicious attacks on companies or players. Typically, cyber criminals are looking to obtain personal information such as credit card numbers, but they also steal virtual goods, sell fake non-fungible tokens (NFTs) and carry out distributed denial-of-service (DDoS) attacks on gaming platforms. Some sell virtual goods, such as "hacks," that purport to improve a gamer's performance, but they are, in fact, Trojan horses for ransomware. Cyber risks will continue to intensify as gaming companies become more involved in selling, buying, trading or holding consumers' digital assets. Security breaches do not only severely damage gaming companies directly, but they could also greatly slow the move to the metaverse by gaming and non-gaming companies alike.

Gaming executives are well aware of their obligations to protect information and validate that games and platforms are safe environments. When we asked them about their challenges around data strategy, many cited cyber risks. Forty-seven percent of respondents say that mitigating cyber risks is a key challenge today. However, looking out three years, that response rate jumps to 58%. Nevertheless, these executives are confident that they will be able to manage cyber risks. They say their companies are taking (or plan to take) steps to mitigate cyber risks, including hiring employees with advanced cybersecurity skills (47%) and partnering with third-party cybersecurity firms (39%).

CHAPTER 3

Insights on the metaverse and the future of gaming

We asked gaming executives about several topics surrounding the future of gaming, including how they saw their companies fitting into the ever-evolving metaverse. With this new digital universe still in its early stages, respondents' views varied: 50% say they understand what the metaverse is and how their organization will participate in it; 26% understand what it is, but say they are not sure how they will participate in it. Lastly, 24% understand the concept of the metaverse, but don't know the details of how it works.

97% of survey respondents believe the gaming industry is the center of the metaverse

Many industry watchers expect the gaming industry to play a prominent role in the early stages of the metaverse, and our survey respondents agree. Most of them (97%) believe the gaming industry is the center of the metaverse today, and all of them expect companies across industries to establish a metaverse presence in the near future.

As first movers, gaming companies have already built an early prototype of the metaverse, and their position as early adopters is well-known across industries. For example, the widely played Minecraft and Fortnite games, as well as the popular Roblox game platform, have incorporated many aspects of the metaverse, including virtual worlds where players meet to play games and use social features such as in-game chats. Many gaming companies also provide in-game payment systems and in-game assets, such as clothes and skins, props, weapons and vehicles, that travel with players across platforms (e.g., PC, console, mobile device). Increasingly, games are doubling as social spaces where gamers forge online friendships and communities.

While companies across every sector are still imagining business possibilities the metaverse offers, gaming executives already see growth potential. When asked about the possible benefits of playing in the metaverse, almost half of the respondents (48%) said that it creates opportunities for new business models, while 40% cited the ability to build closer relationships between brands and customers. They also identified adopting new products and services, improving customer acquisition and building new communities within their customer base as opportunities.

To succeed, gaming companies need to rethink both their product and people investments. On the product side, nearly half of all executives surveyed (49%) say they are prioritizing investments in virtual, augmented or mixed-reality experiences. These technologies will play a prominent role in helping users engage with the metaverse, especially in its early days (though futurists envision a time when a similar level of interactivity is possible without specialized gear).

Executives also know that their employees will need a new mix of skills to harness the full potential of the metaverse. Almost half (45%) cited a need to think differently about hiring because of the new skill sets they are seeking.

NFTs play a lead role in the metaverse

Digital assets, including NFTs, will be a key building block of the metaverse economy. NFTs are unique assets that are stored on a blockchain, such as Ethereum, Polygon or Solana. They serve as verifiable deeds to property that only exists in the virtual world. Their storage on a public blockchain provides security and authenticity and enables NFT mobility across applications. In 2021, NFT sales totaled $25 billion compared with $94.9 million in 2020, and this rapid growth is expected to continue.[6]

Because NFTs authenticate ownership of virtual items and they represent value both now and in the future, they are poised to become a universal store of value for the metaverse.

NFT artwork has received significant attention lately, but almost any item can be turned into an NFT. For example, gamers can buy and earn utility NFTs, such as weapons or skins for gameplay. In the game Axie Infinity, players breed and collect NFTs of digital pets, which are called Axies. There is already a booming NFT land market in virtual worlds, such as The Sandbox and Decentraland. These metaverses allow users to create, develop, host and sell virtual properties. Each land parcel is an NFT.

Outside of gaming, NFTs can be collectibles or branded items (such as shoes or purses); even songs can be minted and sold as NFTs. As the rise of NFTs continues, they will increasingly be used as access passes for sporting events, clubs and other venues, as well as for digital experiences. Some brands are also providing their customers with "member" benefits to use their NFTs (for example, for preferred access to future products and experiences). The possibilities around NFTs are endless. Verifiable ownership means that they can be bought, sold or traded on secondary marketplaces such as OpenSea, Magic Eden or Rarible.

Notably, NFTs allow players to retain total ownership of their digital assets (skins, handbags, weapons, etc.), which enables them to freely trade NFTs with other players in the same publisher universe, sell them for real money and, eventually, use them across multiple blockchains.

In many cases, NFTs will be monetized through smart contracts. These are programs that are stored on a blockchain and run when specific, predetermined conditions are met. So, if one condition is met, then another action automatically executes. For instance, an artist who uses NFT smart contracts can sell a piece to a collector and receive a royalty percentage of all subsequent resales. A musician can sell a stake in a song to investors. With a smart contract, these investors will be compensated every time the song is played on a streaming service.

NFTs also underpin the "play to earn" (P2E) gaming model. P2E gives gamers a financial incentive to play games. This contrasts with traditional gaming, where the assets gamers acquire have no real-world value. In P2E games, players are rewarded for their time and effort within a game by earning cryptocurrencies that can be used within the game, sold in an open market or monetized through smart contracts. For example, if a gamer creates an NFT character that someone else uses to earn cryptocurrencies, the creator receives a portion of those earnings.

As the vast potential of NFTs is still being explored, companies are still trying to understand how to use them. This was evident in our survey, with virtually all respondents saying that digital assets are valuable to their company's future business prospects. When asked what the potential benefits of NFTs will be in the next three years, respondents cited the following as their top responses: increasing customer satisfaction, growing margins, improving the visibility of products and services, enhancing collaboration with nontraditional gaming partners and attracting new customers.

90% of our executives said that while they are interested in digital assets, their companies currently do not have a viable business model to capture value from them.

However, our survey also revealed uncertainty around digital assets: 90% of our executives said that while they are interested in digital assets, their companies currently do not have a viable business model to capture value from them. Also, respondents are skeptical about how much value NFTs will provide over the long term. Ninety-five percent say that digital assets are overhyped and that their value will eventually stabilize.

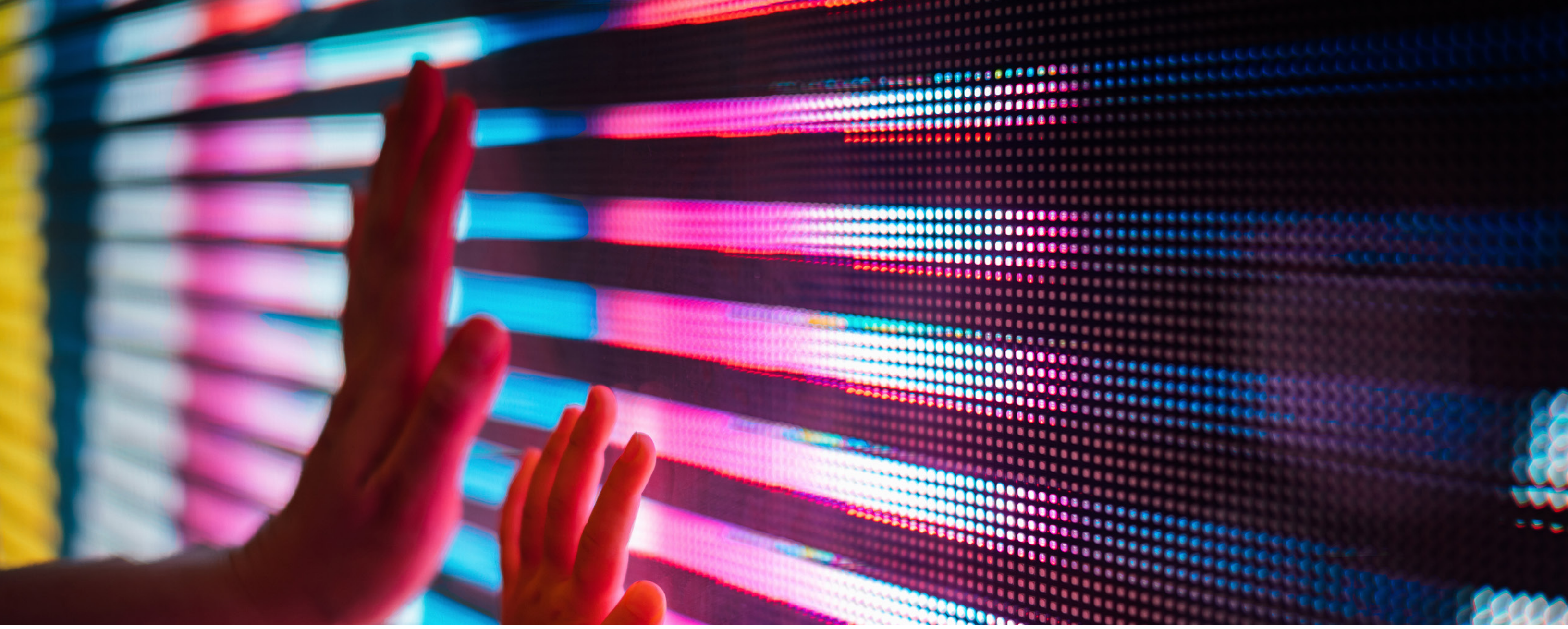
That said, companies across all industries are in experimentation mode in this space. Luxury brands are minting NFTs of iconic creative designs, photos, clothing and accessories. One beverage company is building a brewery in the metaverse that can be visited virtually by users' avatars, which can purchase NFTs. In addition, a car company is minting 3D and vintage drawings of its classic cars as NFTs. And a broadcasting company is minting what it calls NFT collectibles (e.g., premium audio sound bites and artist merchandise collections). While these efforts may not yield sizable financial gains right away, they have the potential to strengthen brands, increase consumer engagement and drive deeper consumer insights as companies learn how NFTs can be used.

However, executives see the current complexity and cost of NFTs as barriers to widespread adoption. To purchase an NFT, potential buyers must navigate an exchange platform to buy cryptocurrency, set up a digital wallet (and link the two) and finally buy an NFT on a marketplace. By and large, today's consumers do not yet have this level of proficiency. Also, when someone buys an NFT, they pay a transaction fee (often called a "gas fee") that goes to the miners who validate and record blockchain transactions. These fees can be quite expensive. Half of our surveyed executives say the lack of standardization of accepted currencies across platforms impacts the viability of digital assets within the gaming industry, while 47% cite high transaction fees. Many industry insiders believe that mass adoption will come when users can buy and sell NFTs with the ease of purchasing an item online with a single click.

CHAPTER 4

Preparing for the future of gaming

In this new dimension, companies must determine where they fit and reassess their capabilities — all with an unwavering focus on the customer. Here are the three critical steps that gaming companies must take to find success.



Develop a metaverse vision

As the metaverse takes shape, gaming companies that are planning to enter this space must develop and articulate an overarching metaverse vision and build their strategies around that vision. Determining the company's overall goal in the metaverse — whether it's boosting existing revenue streams, creating new ones or building the brand — is essential. Who are its customers, and what will they be doing in the metaverse? Beyond this, what value proposition does the company bring (or plan to bring) to its customers? How will the company differentiate itself from its competitors?

The core gaming experience is merely a starting point for the range of social experiences that are possible in the metaverse. Gaming companies must think beyond current gaming experiences and consider what strategic opportunities exist in the broader metaverse. Currently, entertainment events, education, business communications and employee training are the primary non-gaming opportunities in the metaverse, and many others are still being imagined.

Once a broader vision comes into focus, companies must determine how they will generate revenue. Game publishers, for example, generate most of their revenue through the sale of games, in-game purchases, advertising and subscriptions. However, in the next few years this will change, with gaming companies generating revenue in completely new ways. For instance, as NFT adoption grows, games will collect transaction fees from the direct sales of NFTs to users, as well as a portion of secondary sales of NFTs through smart contracts. With the NFT space moving at a lightning-fast pace, today's NFT use cases will soon be obsolete. As such, companies must explore how to monetize NFTs not only today, but also tomorrow and 10 years from now.

While the new gaming landscape offers opportunities, it also presents risks to current business models. For example, the rise of NFTs and smart contracts could upend how gaming companies are structured. As the use cases of NFTs evolve, a "creator" economy also may emerge. In this scenario, game developers and other creators may have greater incentive to monetize their games independently rather than through a gaming company or other third party. At the very least, creators are likely to demand greater control over their creative output. Thus, gaming companies should engage in scenario planning to assess how this change might impact their revenue generation and content acquisition capabilities. The rise of a creator economy will also force gaming companies to re-evaluate their value proposition to content providers. What can they offer newly empowered content creators beyond what they offer today?

Update your operating model to include the metaverse

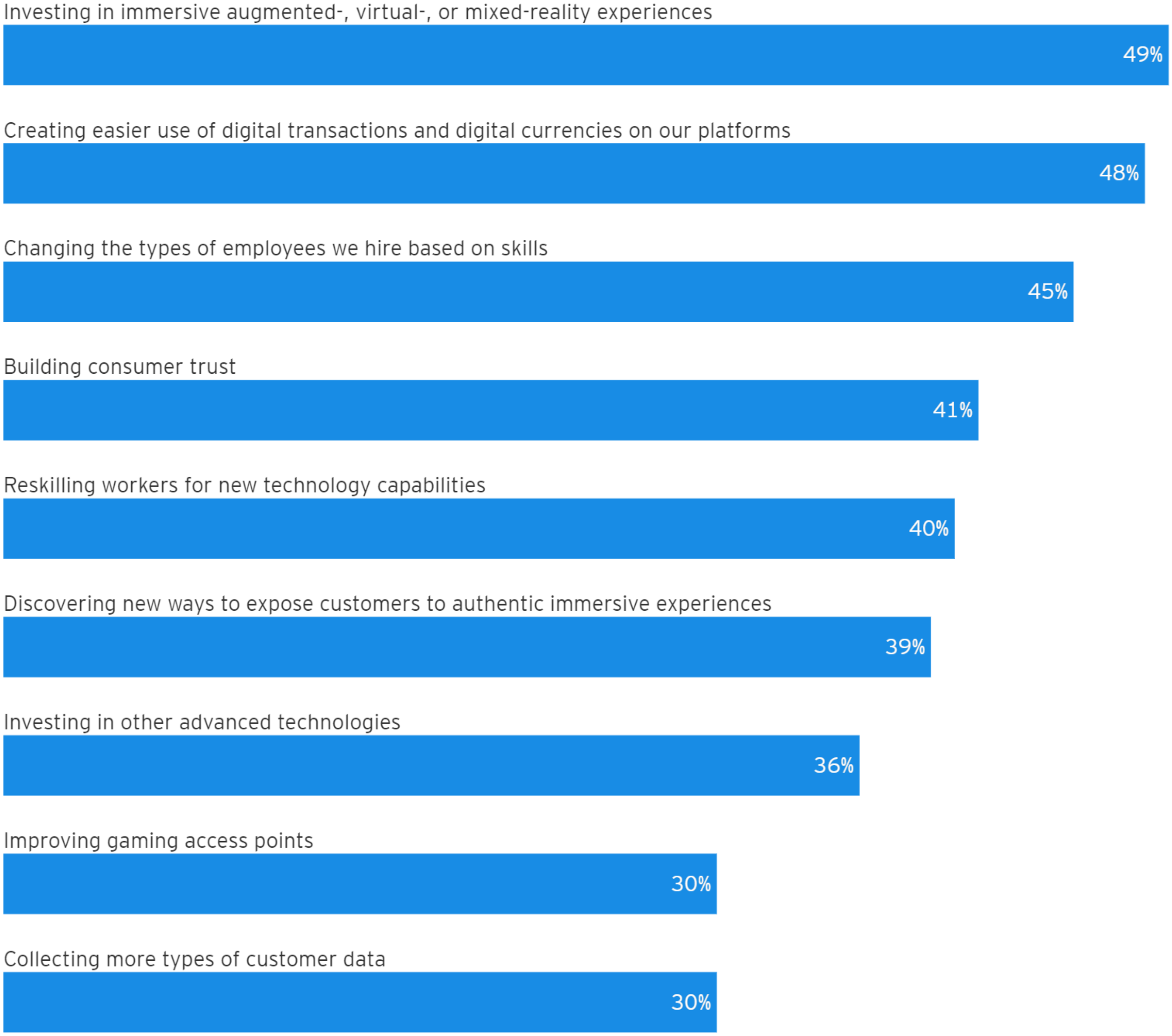
A thoughtful strategy can only come to life if it is backed by an operating model that is optimized to support it. Most gaming companies have finely tuned operating models for their current needs. However, the evolving environment requires gaming companies to reassess their current and future state operating models. Is the company organized in ways that enable it to deliver on promises it has made to users? Are the company's business units aligned with the way the market is evolving? Which assets will be essential in 10 years — and which will be considered noncore?

From a talent perspective, gaming companies will still need countless skilled programmers, coders, designers and technologists. However, the metaverse will be far more expansive than current gaming environments, requiring gaming companies to acquire additional skills sets. In our survey, 40% of gaming executives said improving their current employees' technology capabilities is a priority.

In this climate, competition for talent will be fierce. Established gaming companies are seeing a considerable exodus of talented developers. This is happening for several reasons, with many departing employees citing burnout or an unsatisfying work environment as reasons for leaving. Many young people are particularly drawn to smaller startups, where they envision playing a role in creating Web 3.0. In addition, many startups are now evaluating how they can use NFTs and cryptocurrencies to compensate their workers. While these forms of compensation can be complex to introduce and maintain, established gaming companies should strive to do so as they work to create a culture that is more accommodating to young talent.

74% of Gen Z participants stated that they had purchased digital gaming items for their avatar.

Which of the following should be priorities for the industry over the next three years in the face of increasing demands?



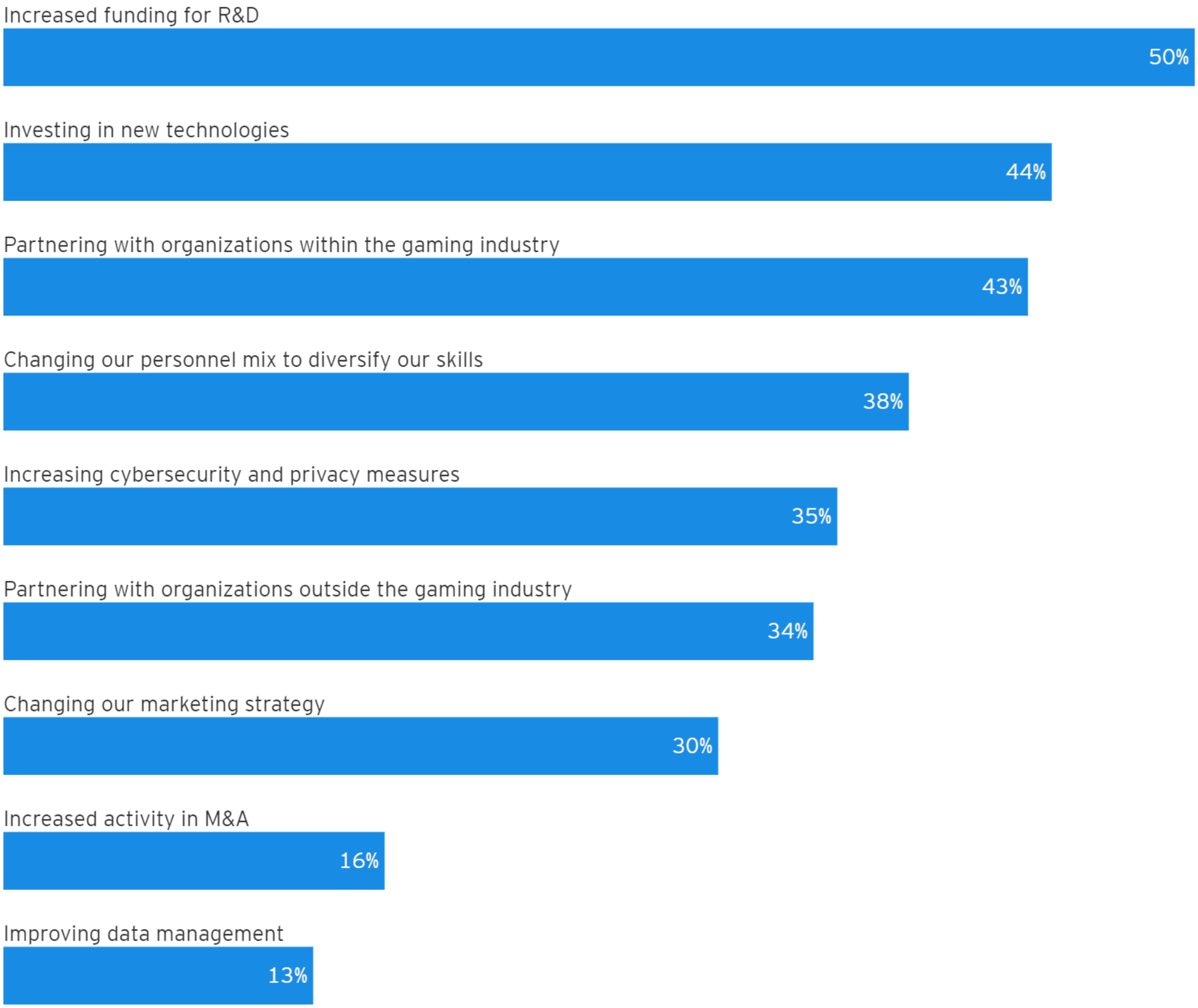
Experience the interactive chart

Indeed, companies of all types can better predict future trends when they leverage fresh perspectives from the next generation. As demonstrated in a recent EY study, Gen Z is shifting societal paradigms and creating new norms around activism, wellness and success. To that end, much of the creativity around the metaverse will come from young people, and Gen Z (i.e., those born between 1997 and 2012) is already highly engaged in the gaming economy. In a recent e-commerce study, 74% of Gen Z participants stated that they had purchased digital gaming items, such as accessories, skins or garments, for their avatar.[7] As gaming companies ponder what comes next, they should view the metaverse through a Gen Z lens. Namely, creating Gen Z development teams, giving them a budget and enabling them to experiment will help advance the company's ambitions in this space.

R&D has always been a source of innovation, so it's no surprise that increasing R&D funding is a priority for gaming executives. However, success requires more than boosting R&D spending. For example, gaming companies need to understand how new business and operating models will impact their product development priorities. They must build a culture that is friendly to innovation and the processes necessary to move rapidly through the innovation cycle — from ideation to prototype, testing, scaling up, launch and feedback.

To increase the speed of innovation, gaming executives also must look beyond the organization. Many gaming companies plan to increase the number of cross-industry partnerships to drive advancement and acquire new capabilities. In our survey, 43% of executives place a high priority on partnering with companies outside the gaming industry over the next three years.

Which of the following business tactics is your organization prioritizing to better participate effectively in the metaverse?



Experience the interactive chart

Create a metaverse with the user at the center

> Companies have to base the customer experience around what a person wants to do in the metaverse … It's not about taking reality and putting it into the metaverse. The rules of engagement are very different.

CARY TILDS
CHIEF STRATEGY OFFICER, FRAMEPLAY

Games like Minecraft and Fortnite have already provided an early look at gaming in the metaverse. However, many games currently operate within a predefined set of rules. In future iterations of the metaverse, a player's digital avatar won't always have an obvious purpose as it moves through various digital realms. The avatar could be seeking a range of experiences — from entertainment and social connection to work, education, commerce and more.

"Companies have to base the customer experience around what a person wants to do in the metaverse," says Cary Tilds, Chief Strategy Officer of Frameplay, a gaming company specializing in in-game advertising. "It's not about taking reality and putting it into the metaverse. The rules of engagement are very different," she noted. How will gaming companies figure out what personalized experiences their customers want? Gaming companies will be challenged to utilize a growing collection of internal and external data to better understand what their customers do in both the gaming world and the real world.

As the amount of available data surges, the internal challenges around data will only intensify for gaming companies. Users will play more games on more devices, in-game purchases will grow and the volume of transactions will increase. The amount of data created and replicated for the metaverse by 2025 could be 3 million to 4 million petabytes per year by one estimate.[8]

The evolution of gameplay itself will further complicate the data landscape. For example, VR and peripherals will soon be core to the gaming experience. The use of haptic suits in gaming is also expected to grow significantly in the coming years. These wearable devices provide sensory feedback to users and collect input about their physical response to gameplay — including even facial expressions such as a smile or a frown. These innovations all provide new data that gaming companies must manage and analyze.

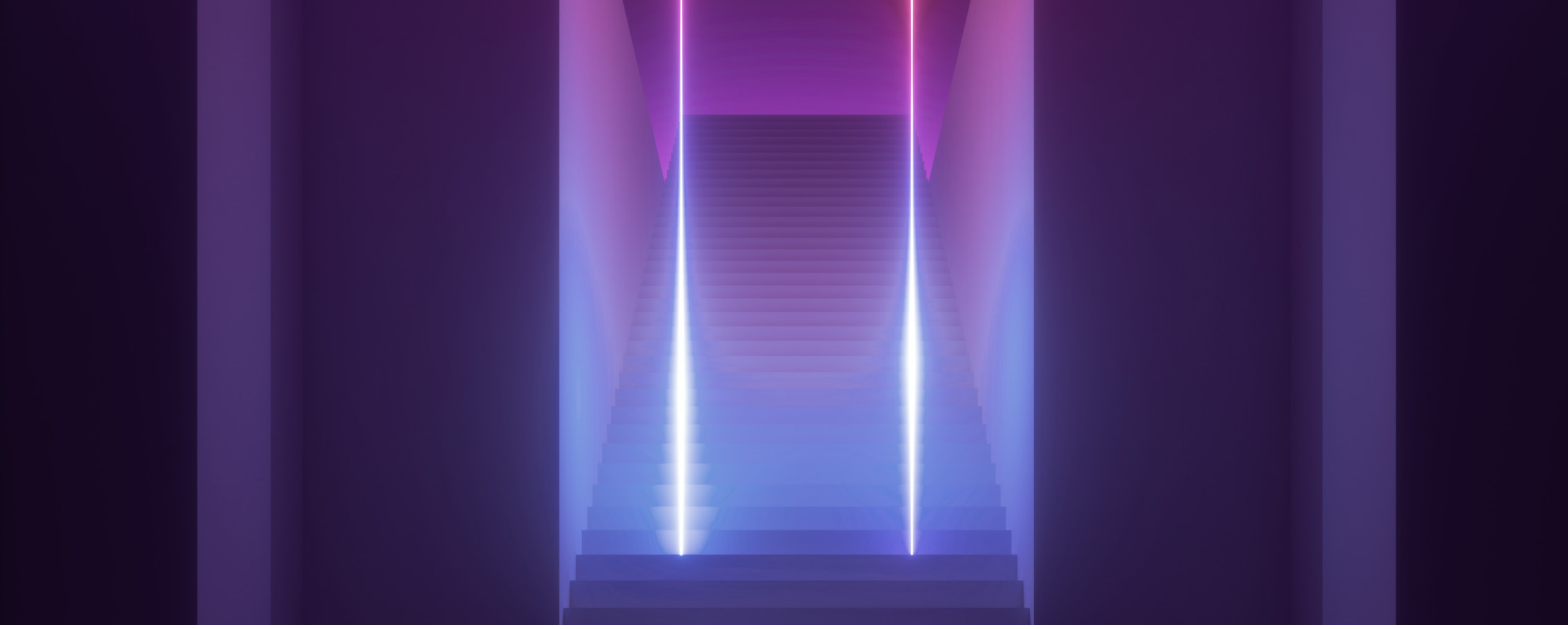
To make sense of this flurry of data, companies must do the following:

1. Develop a clear vision of how their gaming data can create competitive advantage.
2. Break down organizational and technical silos within the organization that house disparate data sets to achieve a 360-degree view of customers.
3. Deploy visualization and analytics tools to translate data into useful forms that employees can use.
4. Utilize a new generation of artificial intelligence tools, such as machine learning and artificial neural networks, to find hidden patterns and insights behind the data.

As gaming companies hone their internal data skills, they also must devote more resources to collecting external intelligence. Conducting surveys, interviews, focus groups and other forms of market research will be critical as gaming companies develop strategies and adapt their businesses to the changing environment.

Many believe that consumers will soon flock to exciting locations in the metaverse, but they won't stay long if they feel personally unsafe or if their personal data is at risk. Wherever people congregate in the physical world, there are bad actors engaging in fraud, promoting extreme political views, exploiting others and more. Likewise, in a world of escalating cyber risk, consumers expect gaming, tech and other companies to safeguard their data. They will frequent, spend more with and return to companies they feel are transparent and trustworthy. In a recent global EY survey of more than 1,900 technology consumers, about two-thirds of respondents said that knowing their data is collected and stored securely is their top concern in choosing whether to share data.

While there likely will be regulatory actions around personal safety and cybersecurity in the virtual world, the gaming industry is frankly moving too quickly for regulators to keep up. Gaming companies must not wait for regulators to develop effective governance and content moderation policies that enable users to feel physically and emotionally safe. At the same time, they must create a comprehensive security infrastructure — including the latest technologies, processes and capabilities — not only to protect the gaming data in their possession, but also to validate that third parties' security controls are adequate to support the company's cybersecurity efforts. By implementing effective measures around both personal safety and cybersecurity now, gaming companies will be in a better position to help shape industry dialogue around these issues now and in the future.



Summary

From data security to smart contracts and NFTs, gaming companies have much to consider as they begin or advance their metaverse journey. But with the right mindset, skill sets and strategic plan in place, they have a significant opportunity to disrupt gaming and drive value as early adopters while this expansive new digital universe continues to take shape.

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