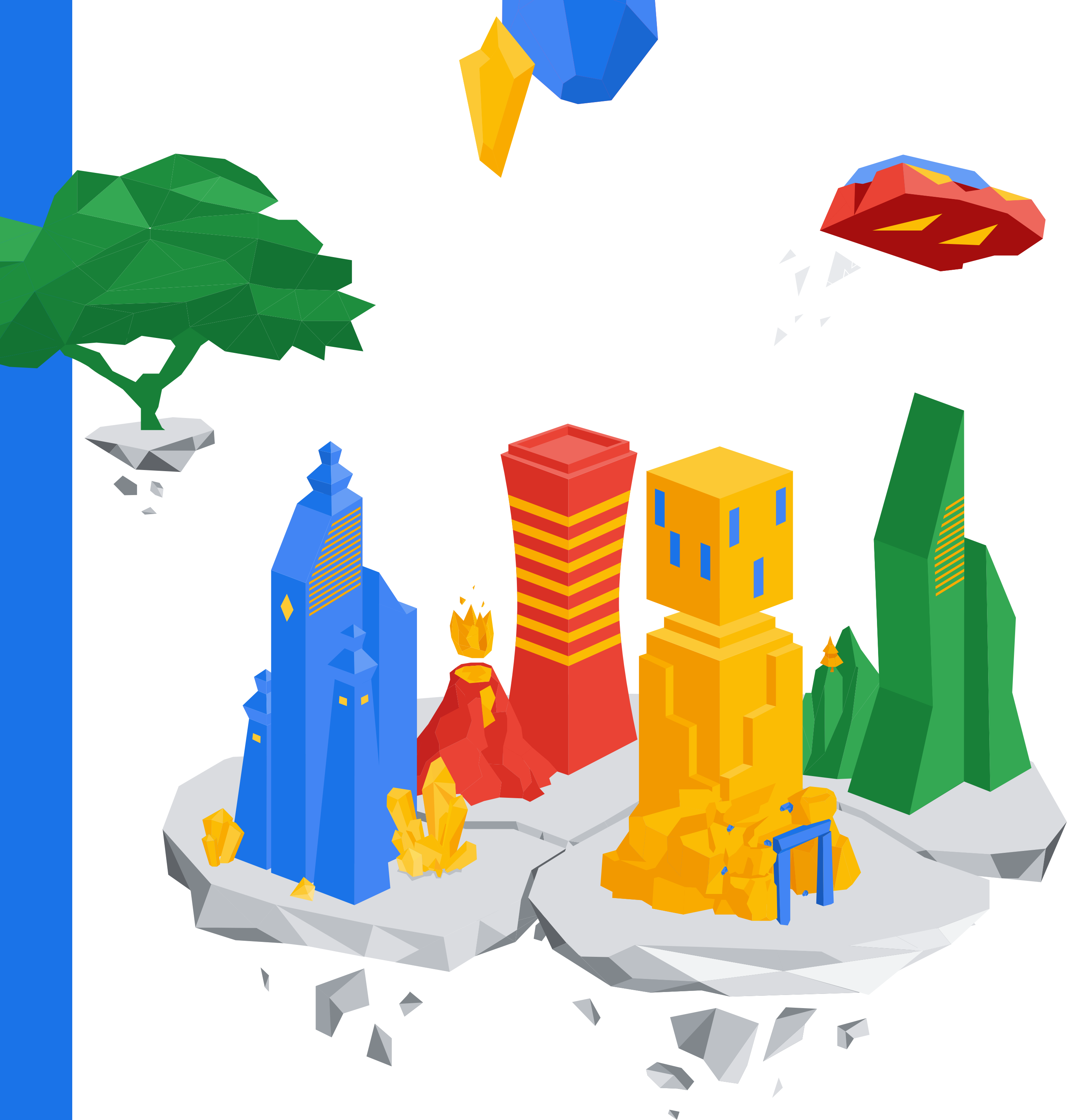


Beyond 2021: Where does gaming go next?

Global gaming market and consumer research report

Google for Games / newzoo

Foreword

We are approaching the end of 2021, and while the COVID-19 pandemic isn't over yet, we can look back and reflect on a strong period for the games market. The unique circumstances of the pandemic months deeply impacted the global games market, shattering player count, revenues, and growth records as gaming brought joy, companionship, and relief to the world's 3 billion players. COVID-19 also accelerated trends shaping how people engage with their favorite games.

As vaccines become more widely available, it's time to start thinking about the future. What will be this period's lasting impact on the games market? What intentions do veteran, new, and returning players have for the future? Which consumer trends surfaced during this period, which trends accelerated, and which slowed down or simply disappeared? And are these changes temporary or permanent?

This report is the first in a series of five - one global and four regional - in which we aim to answer these questions. The four regional reports cover North America, Latin America, Europe, Middle East & Africa and Asia. The series is the result of a study conducted by Newzoo, covering the period between February 2020 and May 2021, and based on both market analysis and consumer insights.

We define veteran players as those who were playing before February 2020, new players are those who started playing for the first time between February 2020 and May 2021, and returning players are those who stopped playing (at least once) before February 2020 and started playing between February 2020 and May 2021.

The global gaming audience and market

This year is witnessing intense worldwide growth in the gaming market. The world's nearly 3 billion players will spend a combined $175.8 billion on games. Mobile game revenues, at $90.7 billion, account for 52% of the global market.

2021's growth continues last year's success. In 2020 the games market grew +23.1% year over year, to $177.8 billion. Globally, the market will grow with a CAGR (2019 to 2024) of +8.7% to reach $218.7 billion in 2024, passing the $200 billion threshold in 2023.

A total of 173 million new and previously lapsed players flocked to gaming in 2020, while veteran players played more than ever. Our study found that an impressive 20% of players were either new or returning players (15% of the players were lapsed gamers reactivating, 5% were new to gaming).

Interestingly, almost 53% of these new or returning players

Fig.1 | 2021 Global players | Per region with year-on-year growth rates

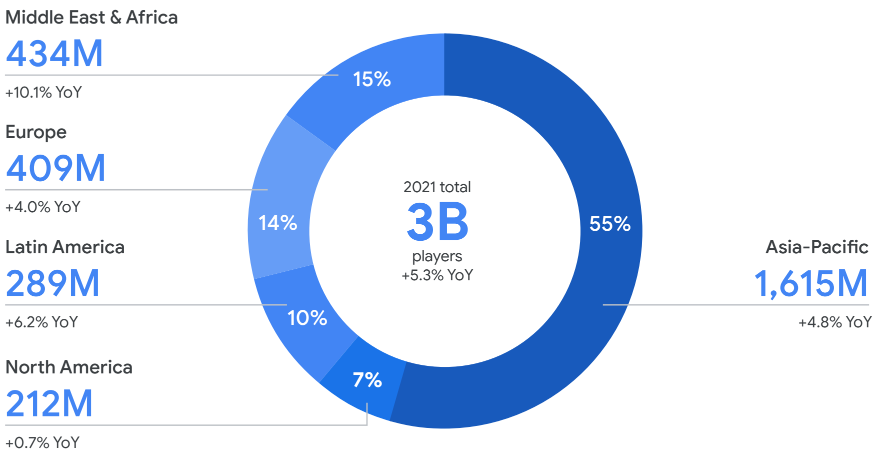


Fig.2 | 2021 Global games market | Per region with year-on-year growth rates

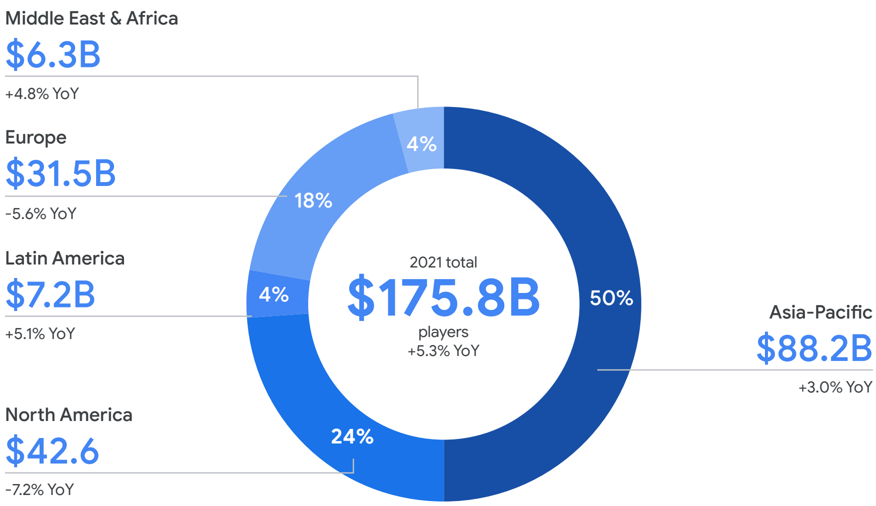
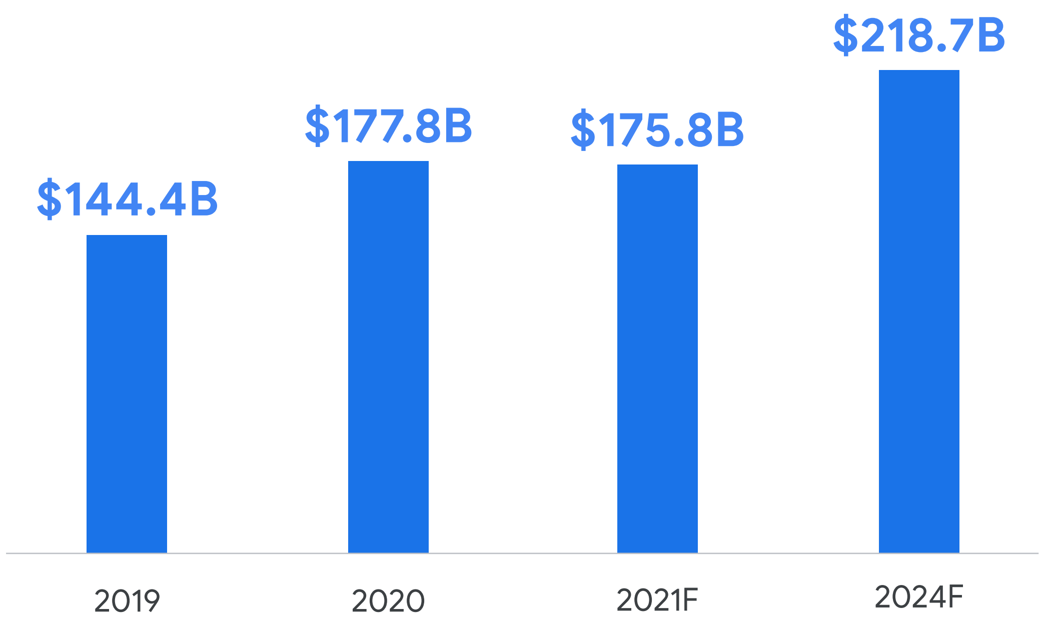


Fig.3 | Global games market forecast | Newzoo global games market report - global



are female, compared to a 46% female share among veteran players. The months between February 2020 and May 2021 accelerated toward a player audience equally split by gender.

Expected future play behavior for new and returning female players is lower than their play time between February 2020 and May 2021 - but the majority of female players expect to stick around. This is particularly true of mobile games, which our respondents expect to play for similar amounts of time in the second half of 2021 and beyond.

On a global basis, the largest group of players during the period of study were veteran gamers who increased their playtime (by 42% globally). As this graphic shows (Fig.5-pag7), most of the growth in the games market came from veterans

A total of 173 million new and previously lapsed players flocked to gaming in 2020, while veteran players played more than ever

Fig.4 | Gender split among players | Newzoo & Google consumer research - global

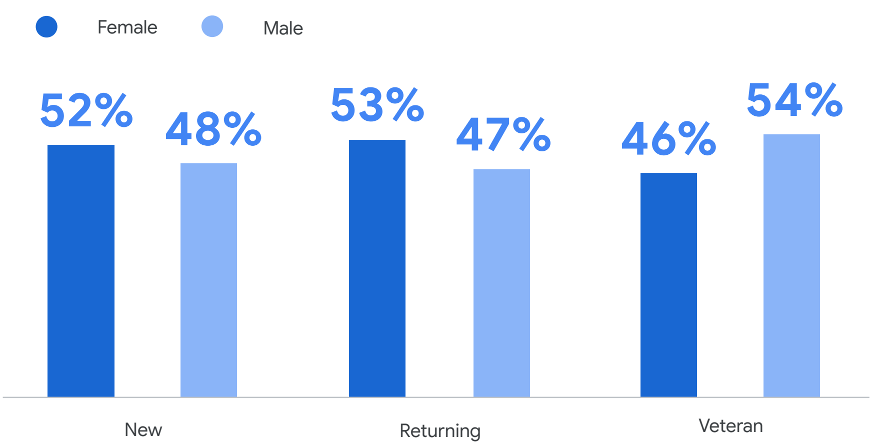
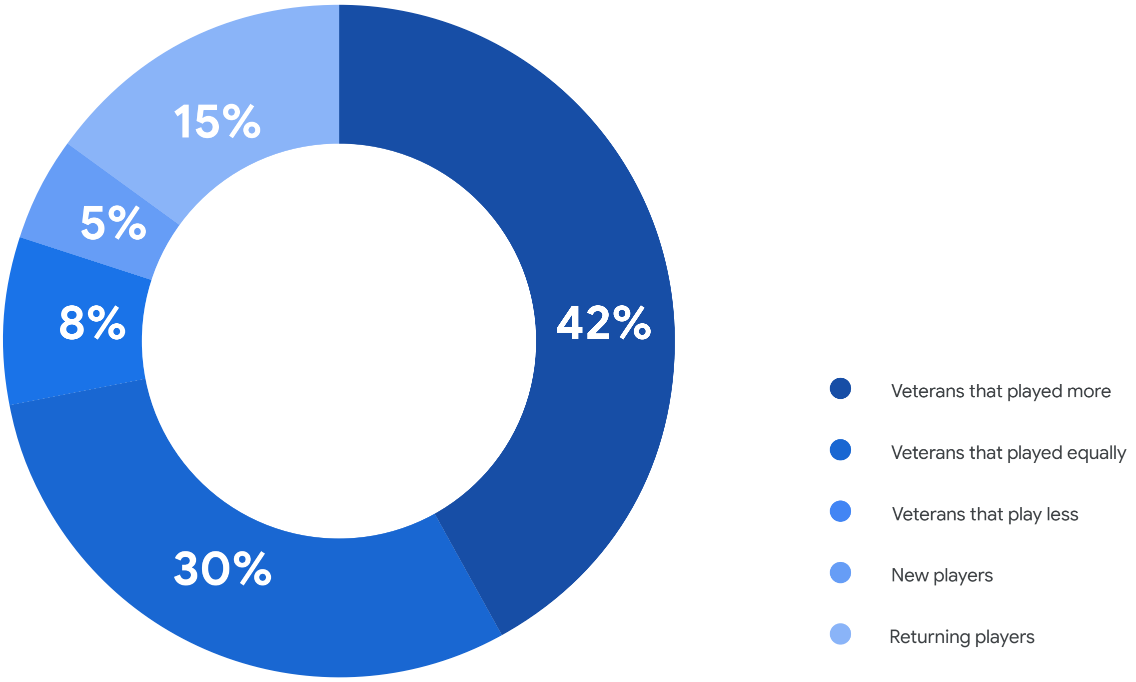


Fig.5 | Players between February 2020 and May 2021 | Newzoo & Google consumer research - global



78% of veteran gamers spend on games versus 73% of new or returning players. Before developers get carried away by the influx of new players, your retention strategy should aim to retain all players

investing their newfound free time into playing more.

Veteran players are also more likely to spend money on games than new or returning players, but only by a small amount: 78% of veteran gamers spend on games versus 73% of new or returning players. Before developers get carried away by the influx of new players, your retention strategy should aim to retain all players. There are opportunities in engaging all groups.

The gaming market's recent evolution suggests dual themes for future game design choices. The next section focuses on novel themes — new ways players engage with gaming content. Technologies and services haven't necessarily changed, but the way consumers use these technologies or services certainly has.

Novel themes

New ways that players are engaging with gaming content

Gaming subscription services provide a new entry point into gaming for veteran and new players

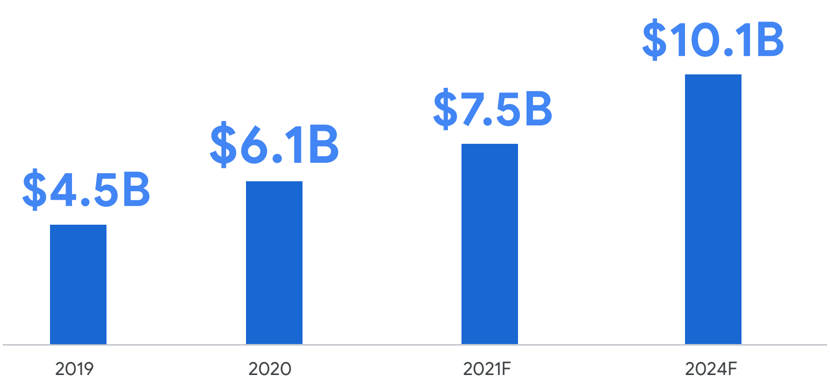
2021 was a turning point for gaming subscription services (services that offer access to software content and/or online gaming servers without providing platform/hardware access like a cloud gaming service). Game subscription monetization is nearly the opposite of the free-to-play model: it offers access to a selection of premium games for a fixed monthly fee, instead of free-to-play's thousands of games that encourage players to spend freely on in-game purchases.

Gaming subscriptions rose in popularity during the pandemic, as gamers sought to stretch their budgets while still playing a wide variety of titles. Platform subscriptions are the second-most popular game spend category for PC, console, and cloud players in North America, Latin America, and Europe, Middle East & Africa, full games being the most popular.

Subscriptions also offer immediate access to libraries of games for new and returning players. Our research found that new console, PC, and cloud players spent almost equal amounts of their monthly budget on game subscriptions (just 20% more on full games), whereas veteran and returning players spent nearly 70% more of their monthly budget on full games than on subscriptions.

Right now, subscriptions are most popular on consoles for access to services such as Xbox Game Pass, PlayStation Now, and Nintendo Switch Online; consumers will spend $7.5 billion and are projected to be the fastest-growing spending category between 2019 and 2024.

Fig.6 | Console subscription revenue| Newzoo global games market report - forecast



Players' willingness to spend on mobile game subscriptions is also reflected in their willingness to spend between 7% to 9% of their mobile gaming budget on a premium, ad-free experience. Developers, publishers, and platforms alike can offer an alternative for those players who are willing to spend for an ad-free experience, while those that don't can continue to use the apps with ads.

The crumbling barriers between platforms (due to cross-platform play) has the happy result that mobile developers can publish on mobile stores while also joining a subscription services on console and PC. Furthermore, the continued shortage of high-end gaming devices should push developers even more towards cross-platform games to avoid limiting their potential audience by committing to a single platform.

To sum up: whether you're developing for mobile, PC, and/or console, you should be considering offering your game through a subscription service as part of your distribution and monetization strategies.

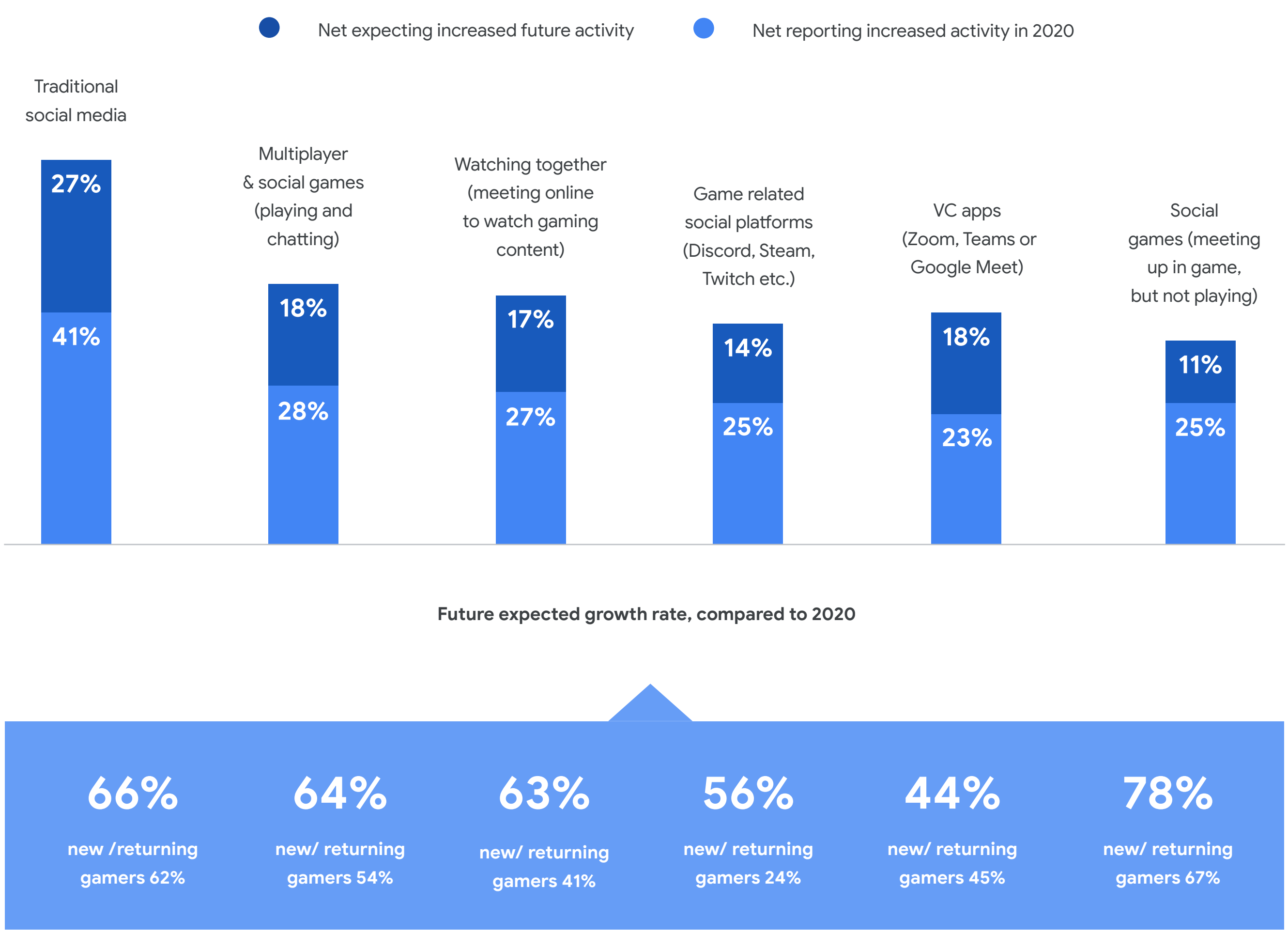
Using games to socialize

Technology is blurring the lines between the gaming and non-gaming experience, and potentially expanding these gaming worlds to new audiences. These developments are changing how we express ourselves, how we connect with each other – and/or with brands – and even our expectations of what a gaming experience can be.

Gaming has always been an inherently social experience. Arcades and console couch co-op games offer early examples of the value of social gaming. Players have long congregated, physically and digitally, to chat, compete, and discuss strategies and lore with like-minded fans.

At its core, gaming is a universal language that connects people through shared passions, objectives, and experiences. Gaming's interactive nature in tandem with the immersive nature of game worlds provides a social experience that's distinct from social media apps. During the months where real-life interactions were limited, games helped fulfill people's intrinsic need to socialize. In fact, successful games like Fortnite prioritize the social experience as highly as gameplay.

Fig.7 | Social platform usage | Newzoo & Google consumer research - global



Gaming's interactive, immersive nature in tandem with the immersive nature of game worlds provides a social experience that's distinct from social media apps

Our research shows that games affirmed their role as a new leading social medium in 2020 and 2021, when social/multiplayer gaming was the second-most-used platform for staying in touch with others, trailing only traditional social media.

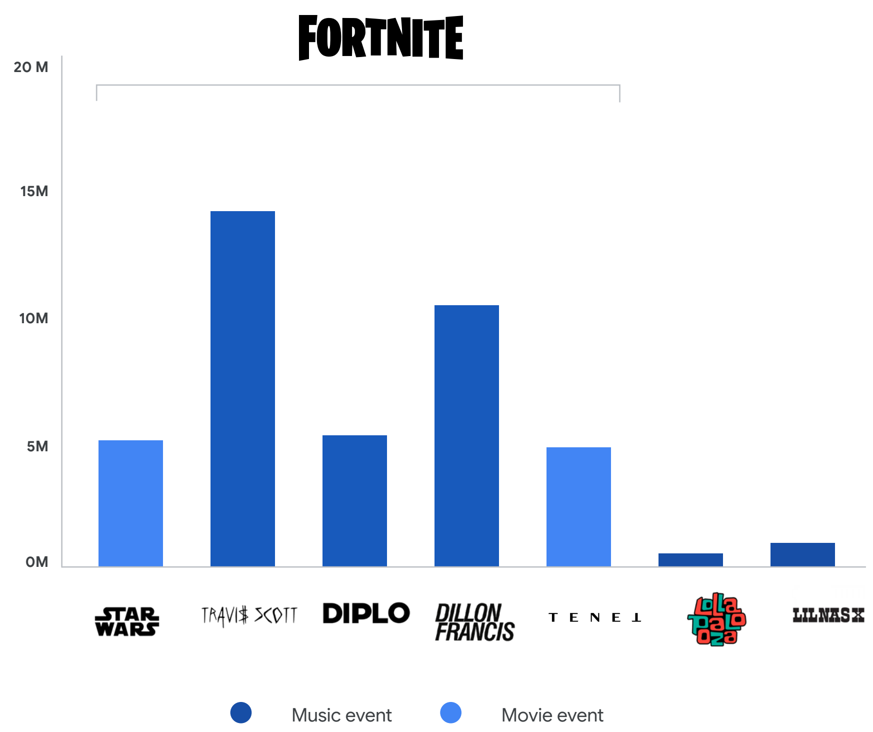
COVID-19-related stay-at-home orders certainly led to more players wanting to simulate real-world activities with friends, and contributed to leading game companies racing to develop the first metaverse — which we define as virtual, persistent game worlds that unlock creative spaces and identities for social human experiences.

The metaverse is the gaming industry' next major evolution. This change is being driven largely by a combination of technology and how consumers are interacting with games. Social, live (non-gaming) events, community and viewership are design choices that developers need to consider. The metaverse transcends social media in its ability to allow users to not only interact socially but also to explore personal identity and self-expression through avatars and visual customization. When we asked players what type of features they want to see in a metaverse, the ability to choose the physical appearance of one's avatar was the most sought after.

Publishers are driving new ways to engage with their games through experiences like virtual concerts and fashion shows, IP activations, and media/product partnerships. These broadly appealing experiences and in-game events in popular social games such as Fortnite, Minecraft, and Roblox have attracted millions, including even non-gamers, to virtual worlds. The Travis Scott Astronomical Fortnite concert, for example, drew nearly 28 million unique players who collectively attended the event nearly 46 million times.

Gamers want to be able to share these experiences through gameplay, events, social media and , streaming integration. How can you meet their needs when you're developing your next title?

Fig.8 | Fortnite, Minecraft & Roblox promotional event viewership | by live hours watched on Twitch and YouTube



Accelerated themes

Themes that were given a boost during the pandemic period

Consumption of live-streaming and game video content

The community around live streaming enables gaming's social aspects, whether it's built into games like Among Us or through live concerts within worlds like Fortnite and Roblox. The global gaming live-streaming audience will hit 728.8 million in 2021, growing +10.0% from 2020. The pandemic may have accelerated the adoption of live-streaming, with growth projections at 920.3 million by 2024, a CAGR of +9.2%. Watching esports and live-streamed content ranked highest of all forms of gaming engagement across the countries covered in this research.

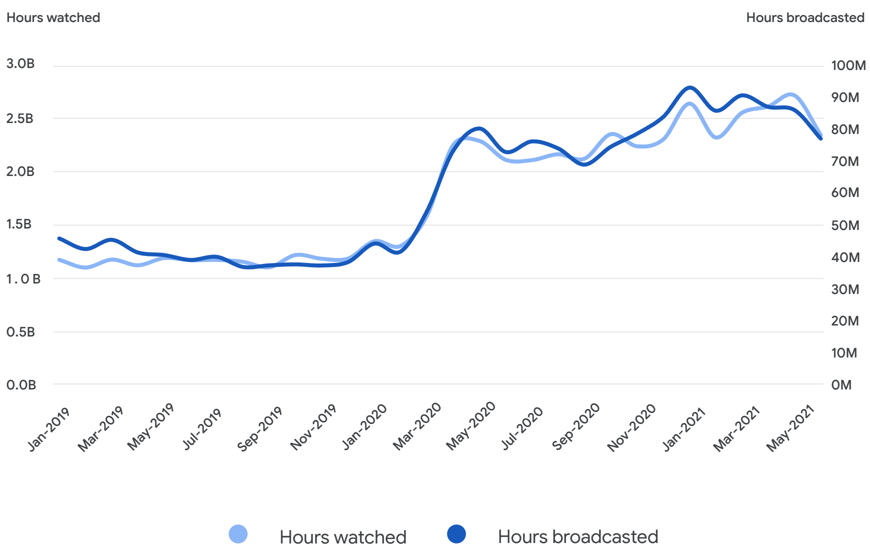
Platforms like Twitch, YouTube, and Huya offer both welcome distractions and social spaces in which fans can interact with others via chat. To that end, game content across Twitch and YouTube generated a combined 25 billion live hours watched in 2020, marking a 76% increase over 2019.

Now, more than halfway into 2021, that interest has not waned. In this year's first five months, fans watched 13.6 billion live hours across Twitch and YouTube. At this pace, 2021 is on track to be another record-breaking year for game live-streaming. Our survey respondents were not shy about expressing their interest in watching gaming content; players' overall expectation to keep watching is much higher than their expected future time spent playing and spending on games. When asked how they expect their engagement to grow compared to current levels, players across all regions expected to watch more live-streaming content in the future - from 7% more than current levels in Turkey, Israel, and Europe to as much as 39% more than current levels in the U.S.

Live-streaming and game video content growth are essential aspects of the gaming experience, and are only accelerating. Online video channels are already the second-most trusted source of game discovery after friends and peers, and these channels rise in importance as players reach veteran status (and we've already learned these veterans are more likely to spend as well).

Game developers should expand their engagement strategies to continuously engage with their content creators and audience, and not just momentarily to create hype for launch; it's crucial to understand that a game's viewing audience is key to nurture the community that's in a decisive position to help promote their games.

Fig.9 | Hours watched and streamed on Twitch and Youtube



Newzoo global esports and live-streaming market report

Cross-platform play

Games are escaping traditional platform silos to meet users where they are, on any platform they choose. The strategy of offering seamless game experience across platforms has been adopted by games like Fortnite, Hearthstone, Minecraft, and—perhaps most notably—miHoYo's Genshin Impact, which is a mobile-first game and the first title in a brand new IP. Genshin's seamless and successful interplay between mobile and console has been an undeniable success story, setting a precedent for other publishers. Likely inspired by Genshin's success, Zynga acquired Echtra Games in March 2021 with hopes to use the studio's experience with crossplay titles to develop their own.

Although some games haven't created a fully cross-platform experience, as the need to converge across multiple platforms becomes universal many games are making the jump from one platform to another. For instance, traditional PC and console developers are eyeing the world's 2.8 billion mobile players with adaptations of popular titles for the mobile screen. Many of the current top 10 most played franchises on PC and console, including Call of Duty, League of Legends, Minecraft, and Roblox, have or will have mobile adaptations. In Eastern markets, this transition started nearly a decade ago, when popular franchises made their way to mobile. Some of these games, including notable ones such as Final Fantasy and The Witcher, are now among the industry's highest-grossing titles across all segments and have inspired a long list of console developers to launch mobile adaptations.

Mobile games are also branching out to other platforms. Gameloft revealed that its popular, mobile-first racing franchise Asphalt, which dominates the racing genre on mobile, is coming to Xbox consoles. Other titles have ported to other platforms as well, either to meet audiences on their platform of preference (for example, by launching a browser version) or to tap into the lucrative console market (such as Genshin Impact).

Our research shows that the average player already plays on multiple platforms. In fact, across all four major regions, the overlap of players between PC, mobile, and console is consistently above 50%. Each has their preferred platform, but it's in developers' interest to meet players wherever they want to play in the moment–especially as more time spent playing converts into additional revenue. The future isn't about what platform to develop for, but how to make sure your audience can play your game in the moment they want to play it.

> The future isn't about what platform to develop for, but how to make sure your audience can play your game in the moment they want to play it

With the boundaries between platforms crumbling, consumers have gotten used to the convenience of seamlessly switching between TV and mobile screens when watching a show or a movie. Now game developers for PC, console, and mobile can all benefit from making their titles as convenient and accessible as possible.

Cloud gaming

Although still an emerging platform compared to PC, mobile, and console, cloud gaming attracted a significant audience over the past 16 months, growing by more than 12 million paying users in just twelve months to 14.2 million paying users by the end of 2020 and, according to a Newzoo forecast, to 23.7 million by the end of this year. Together, cloud players will spend a combined $1.4 billion for access to cloud gaming services such as Google Stadia and NVIDIA GeForce Now.

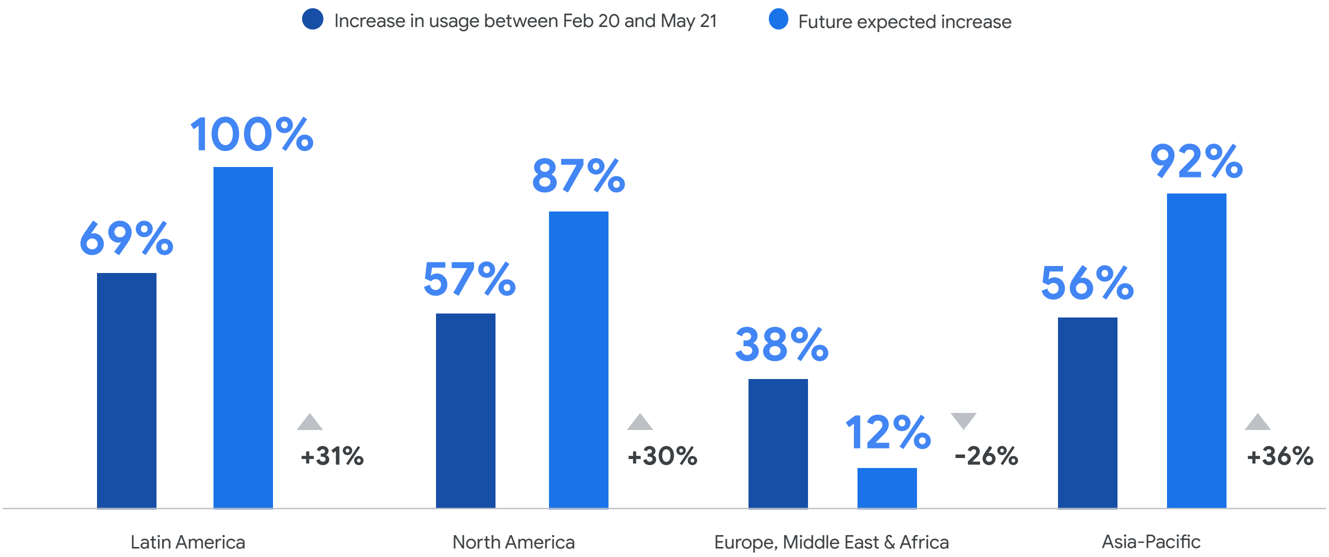
Survey respondents indicate that cloud gaming services are where the most future growth is expected, particularly in Latin America and North America.

Cloud gaming services are where the most future growth is expected, particularly in Latin America and North America

The ability to play the latest games without having to purchase the newest hardware has led to increased demand for cloud gaming solutions. Players need a solid internet connection to stream games via the cloud, but the popularity of mobile gaming worldwide might offer a solution: as network operators are willing to invest in 5G infrastructure due to its advantages for mobile gaming, 5G rollout could become a catalyst for cloud gaming to break into the mainstream.

Meanwhile, cloud gaming fits well with the economics of certain markets, as players become used to subscription payment models. In Latin America, for example, high tariffs on imported hardware make console purchases particularly expensive. In this market, players expect their usage of cloud gaming services to increase by 51% in 2021 and beyond.

Fig.10 | Observed and expected growth in cloud gaming usage per region | Newzoo & Google consumer research - global



Based on custom research, percentages indicate cloud players reporting an increase, plus new players, minus those reporting a decrease.

Future-proofing the industry

A new way of operating for the years to come

A key industry question: how can we do this better?

Pandemic-related delays to game development processes, game launches, and game shipping are impacting consumer spend for both PC and console gaming. Delays for new-generation (PlayStation 5 and Xbox Series X|S) games are notably challenging, particularly for PlayStation, whose first-party games are full price only at launch, as opposed to Xbox's more subscription-based strategy with Game Pass. This problem has been compounded by a global semiconductor shortage, which is impacting the supply of consumer electronics, including next-generation consoles and high-end PC components. Although the pandemic is considered the primary cause of the shortage, solving it could take longer, as multiple industries rely on these semiconductors. It might be years before supply for gaming hardware can catch up to demand – so developers that want to maximize their potential audience need to develop for multiple platforms and across device generations.

The pandemic has had a relatively minor impact on mobile, which is far less hardware dependent, and relies more heavily on in-app purchases for popular titles. As a result, the segment is on track to grow +4.4% year over year to $90.7 billion in 2021. Upgrading mobile hardware is less related to spending on content than it is on PC and console, as hardware isn't a barrier to the most popular mobile games. While changing advertising policies by large mobile platforms could impact ad-driven strategies and audience targeting in the short term, the mobile industry has been able to adapt quickly to a changing landscape. The temporary delays in PC and console game releases gives mobile developers an opportunity to fulfill the need for complex, high-fidelity games - if they can provide the high-quality AAA experiences these players crave.

From now on, game development will have to adapt to constantly shifting circumstances. In the first half of 2020, game delays prevented publishers from providing players with an adequate launch experience due to shipping limitations. But even at the time, leading gaming voices warned that most game delays were likely to hit in 2021 or later. Crucial areas of game development like motion capture and voice acting, which require large in-person teams, were put on hold. Other production processes had to be adapted for remote work.

As the pandemic raged on, problems surrounding game production increased. In GDC's 2021 "State of the Game Industry" survey, 44% of 3,000+ respondents answered that their game suffered delays, up from 33% the year before. Working from home isn't inherently negative, but work flow and management processes weren't prepared for a dramatic shift in how they develop and collaborate. This moment identified a potential weakness in game development's reliance on physical proximity. But it also inspired change: more developers than ever are open to remote work, with some studios going as far as declaring themselves location-less. We don't suggest that every team adopt that style of working, but it does beg the questions: are there different styles of working that we should consider? How can we do this better?

Conclusion

The question of permanence

In our concluding section we look at gamers' expected future behavior and our market forecasts for 2022 and beyond.

Roughly half of gamers across mobile, console, and PC plan to continue their current gaming habits into the future, and up to 75% expect to maintain or even increase their gaming activity.

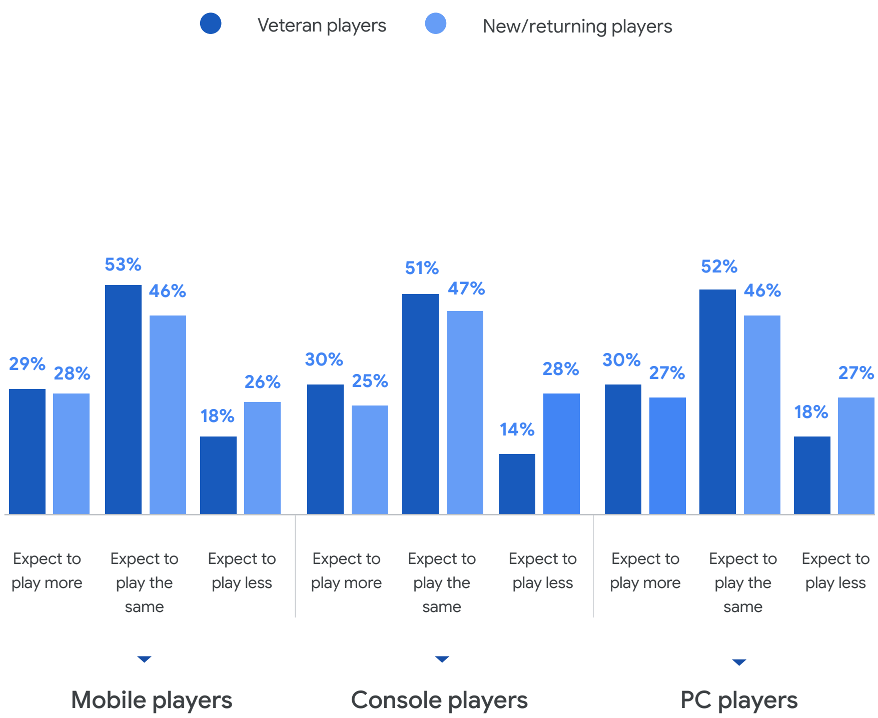
We see the biggest gap in future gaming expectations between veteran and new and returning players: while 18%-20% of veteran gamers plan to reduce their gaming activity, 26%-28% of new or reactivated gamers, across platforms, plan to reduce or stop their gaming.

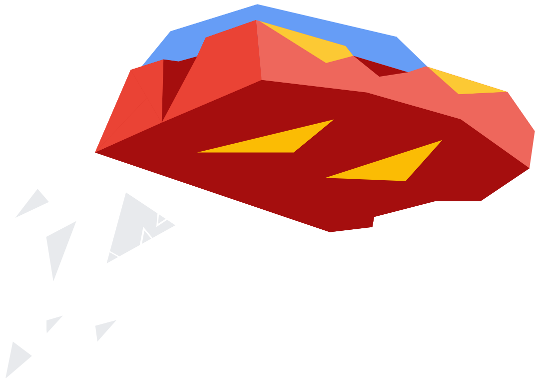
Simply put, the pandemic period between February 2020 and May 2021 activated and reactivated many new gamers, but self-reported data indicate new and reactivated gamers will be the least "sticky" going forward. Going into this research we expected mobile players to be the first to churn, given how low their barrier to entry was compared to PC and console players, but that doesn't seem to be the case; no platform seems any more sticky than the others.

"Retention" is often a blanket statement, but no monolithic retention strategy worked for all types of players in this study (new, returning, veterans); each group has a different expectation for future consumption, and each will respond to different retention narratives. For some, social features will be sticky; for others, in-game retentiveness; for still others, non-gaming elements (streamers, influencers, lifestyle considerations) will convince them to stay.

Throughout this report we've identified trends that players expect to sustain or boost their playing activity in 2021 and beyond. If there's one thread that unites all regions and all types of players, it's that what is likely to drive growth in the coming years isn't actual playing but everything around that: in-game concerts, live-streamed content, esports, identity exploration, or simply hanging out with friends in game worlds. The game might be what gets people through the door, it's gaming culture that's going to keep them coming back.

Fig.11 | Anticipated player behavior after May 2021
Newzoo & Google consumer research - Global





Methodology

All data used in this report is based on a Newzoo study commissioned by Google, It covers over 16,900 respondents in countries across four regions:

- **North America:** United States
- **Latin America:** Brazil and Mexico
- **Europe, Middle East & Africa:** Finland, Israel, Poland, Russia, Turkey, Ukraine, and the United Kingdom
- **Asia-Pacific:** Mainland China, Japan, India, South Korea, Taiwan, and Vietnam

Together, these countries represent 75% of global consumer spending on games. A detailed account of our methodology can be found in the appendix.

This is a research commissioned by Google to Newzoo. It is based on Newzoo's games market sizing and forecast. At the highest level, Newzoo focuses on three key metrics for every market: players, paying gamers, and revenues AKA consumer spending. Newzoo defines a market as a country or geographic region in combination with one or more game segment(s), e.g. PC, console, or mobile. The data on players and payers is mainly based on Newzoo's proprietary consumer research survey, which runs annually between January and April in 33 markets. Revenue data comes from Newzoo's predictive games market model, which uses a top-down approach to market sizing. Newzoo incorporates macroeconomic and census data from the IMF and UN, such as household income and GDP per capita, transactional and app store revenue data from Newzoo's data partners, primary consumer research, partner data, detailed financial information reported by more than 100 public companies, and third-party research. Newzoo also receives valuable input from clients, often leading international game companies.