GAMING SPOTLIGHT

2022 REVIEW

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GAMING SPOTLIGHT 2022

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TRENDS IN GAMING

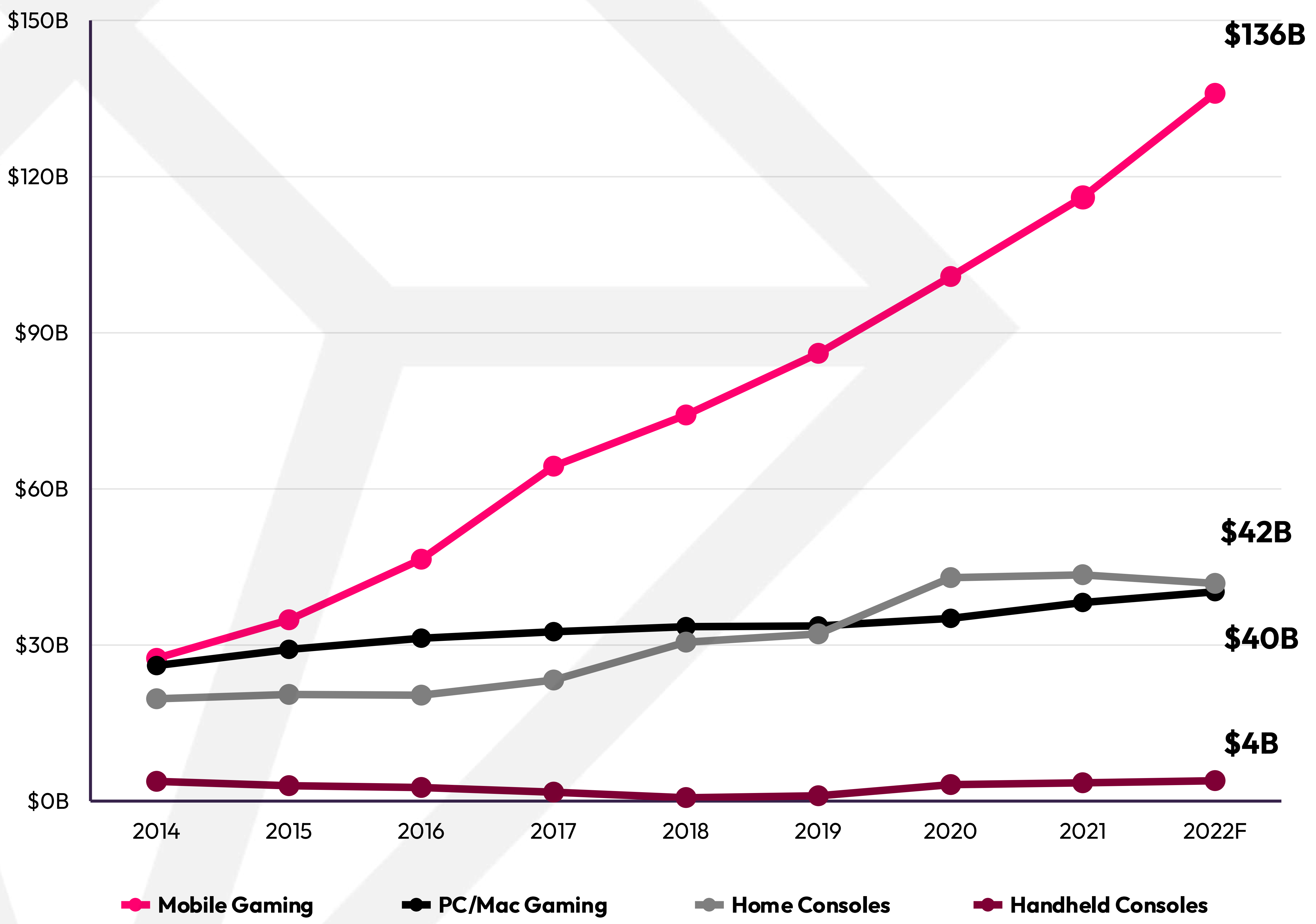
Amidst Cross-Platform Play, Mobile Gaming is Set to Further Extend Its Global Lead to 3.4x PC/MAC

- **Gaming is set to reach $222 Billion in 2022.** Mobile gaming is now the primary driver of growth for digital games consumption and is set to extend its global lead to 3.3x home game consoles in 2022. As COVID-19 prompted a surge in game console sales, broader availability of the newly released XBOX Series X/S and PlayStation 5 consoles will also spur gaming growth further in 2022+.

- The console and mobile experience is also merging; mobile devices are now capable of offering console-like graphics and gameplay experiences along with cross-platform competitive and social gaming features. **But mobile also offers an important channel for a large range of gaming subgenres across the full gaming spectrum. On mobile, gaming is truly for everyone.**

Mobile gaming sustained strong momentum from the pandemic surge — 2021 in gaming was as dynamic as any previous year. The time to act is now.

Worldwide Consumer Spending on Games
by Major Device Group

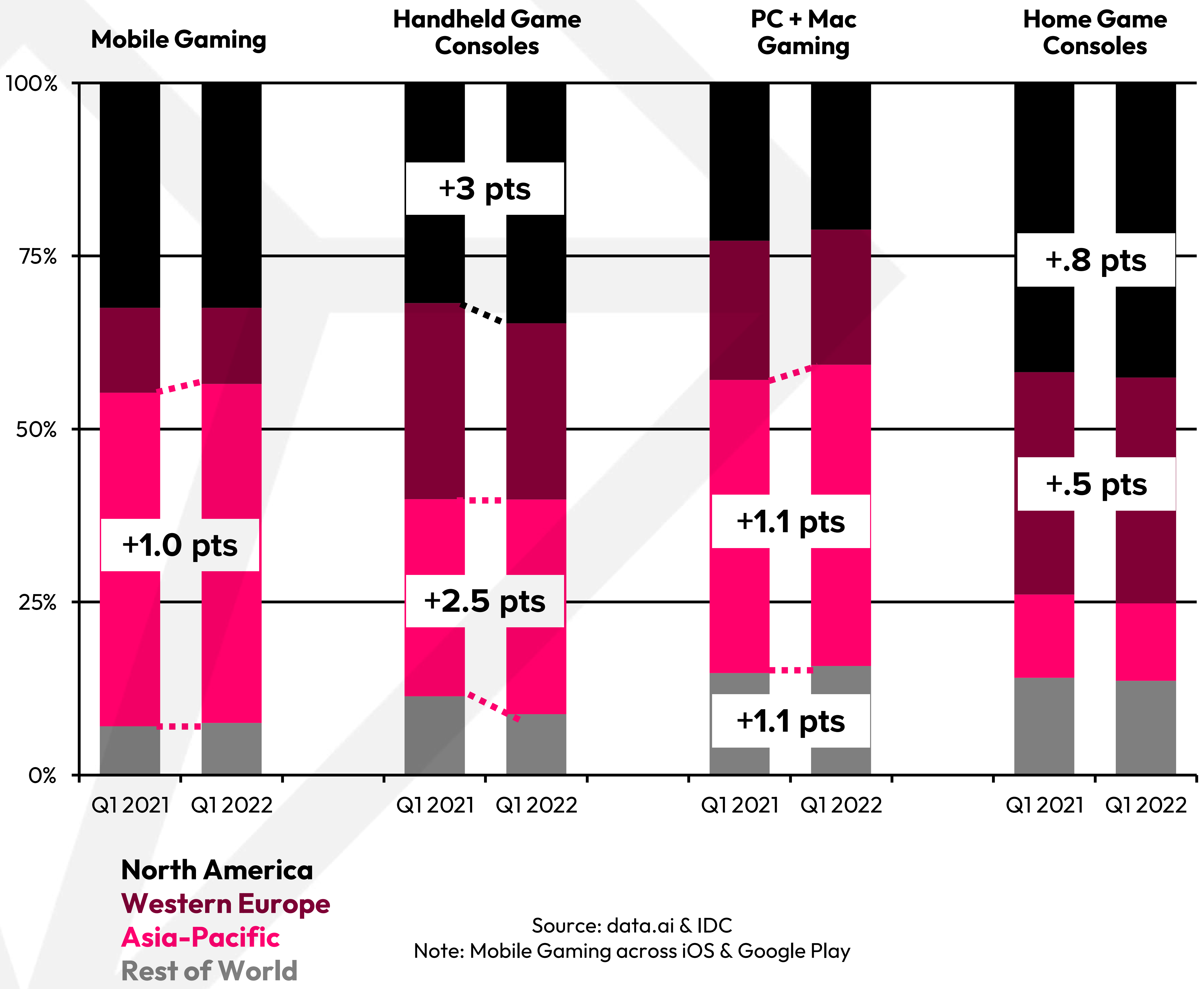


Source: data.ai & IDC. All totals include applicable digital and physical game spending but exclude ad revenue. Mobile gaming includes all app stores (iOS App Store, Google Play, Windows Phone Store, Amazon, Samsung Galaxy and third-party Android stores). Home game console total includes discs, digital games and gaming-related subscription services (i.e., Xbox Live, Game Pass, PlayStation Plus, PlayStation Now, Nintendo Switch Online); handheld consoles are typified by Nintendo 3DS and Switch Lite.

APAC Saw the Biggest Growth in Mobile Games Spending

- **China led growth for the gain in market share** for mobile game spending in APAC from Q1 2021 to Q1 2022. North America and Western Europe still make up around half of mobile gaming spend in Q1 2022, but its market share has levelled as other regions have caught up. Brazil and Saudi Arabia led growth in rest of world for mobile consumer spend.
- **Switch Lite continued to resonate in North America and Asia-Pacific (especially in Japan);** Steam Deck launched in late February 2022 but had a modest impact on 1Q 2022's handheld console segment as a result of Switch Lite's much larger install base.
- **APAC spend in PC/Mac gaming gained share year-over-year** partly because many internet cafes refilled once the effects of the COVID-19 pandemic waned in several large economies; Rest of World strength mainly resulted from a rise in Average Revenue Per User (ARPU).
- **Regional share changes in home consoles was more about faster year-over-year spending declines in Asia/Pacific (led by Japan)** and the Rest of World region (limited semiconductor supply helped undercut PS5 and XSX/S hardware shipments) rather than spending strength in Europe and North America.

Worldwide Consumer Spending Shares on Games
by Region Q1 2022 vs Q1 2021

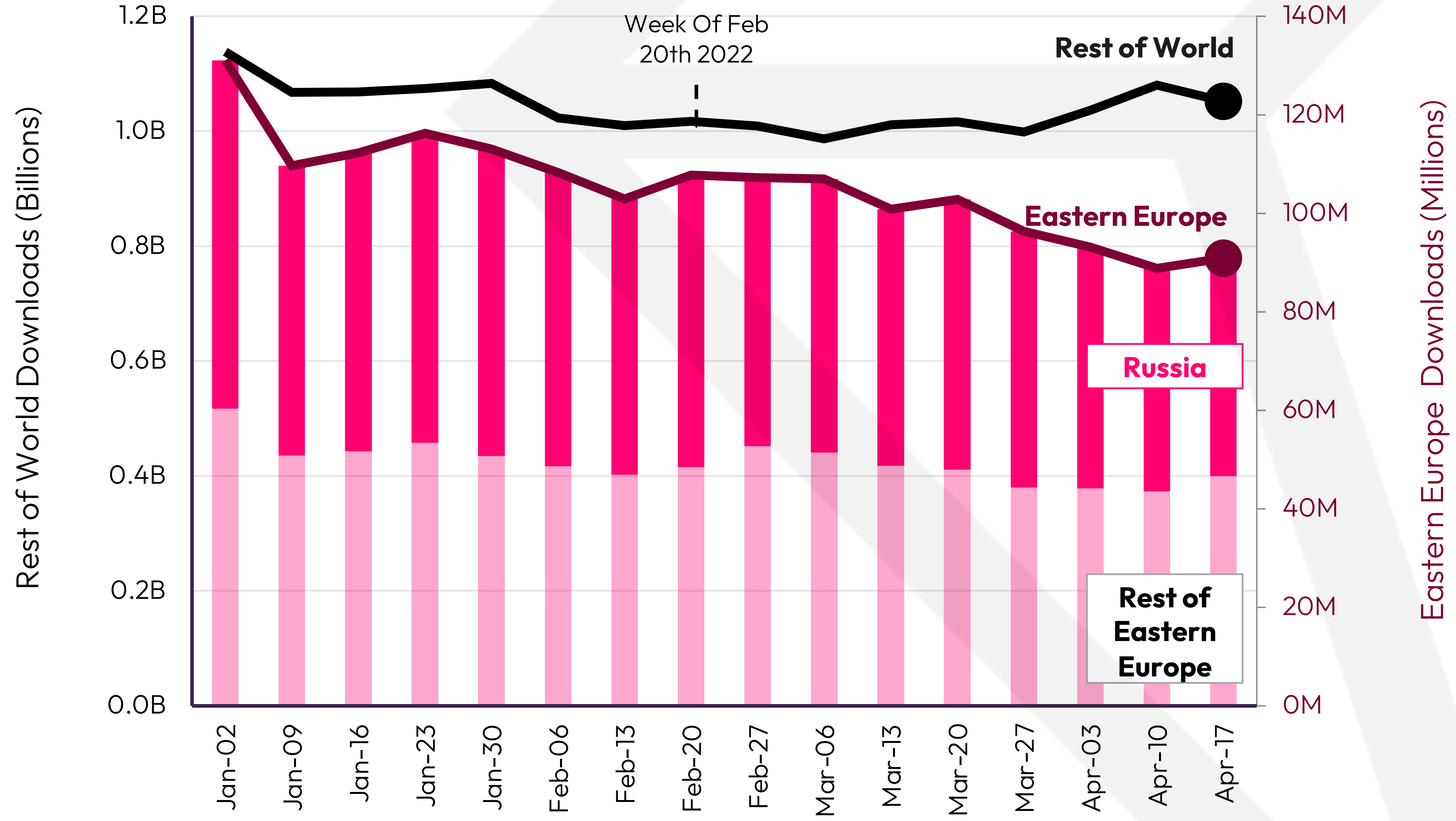


Source: data.ai & IDC
Note: Mobile Gaming across iOS & Google Play

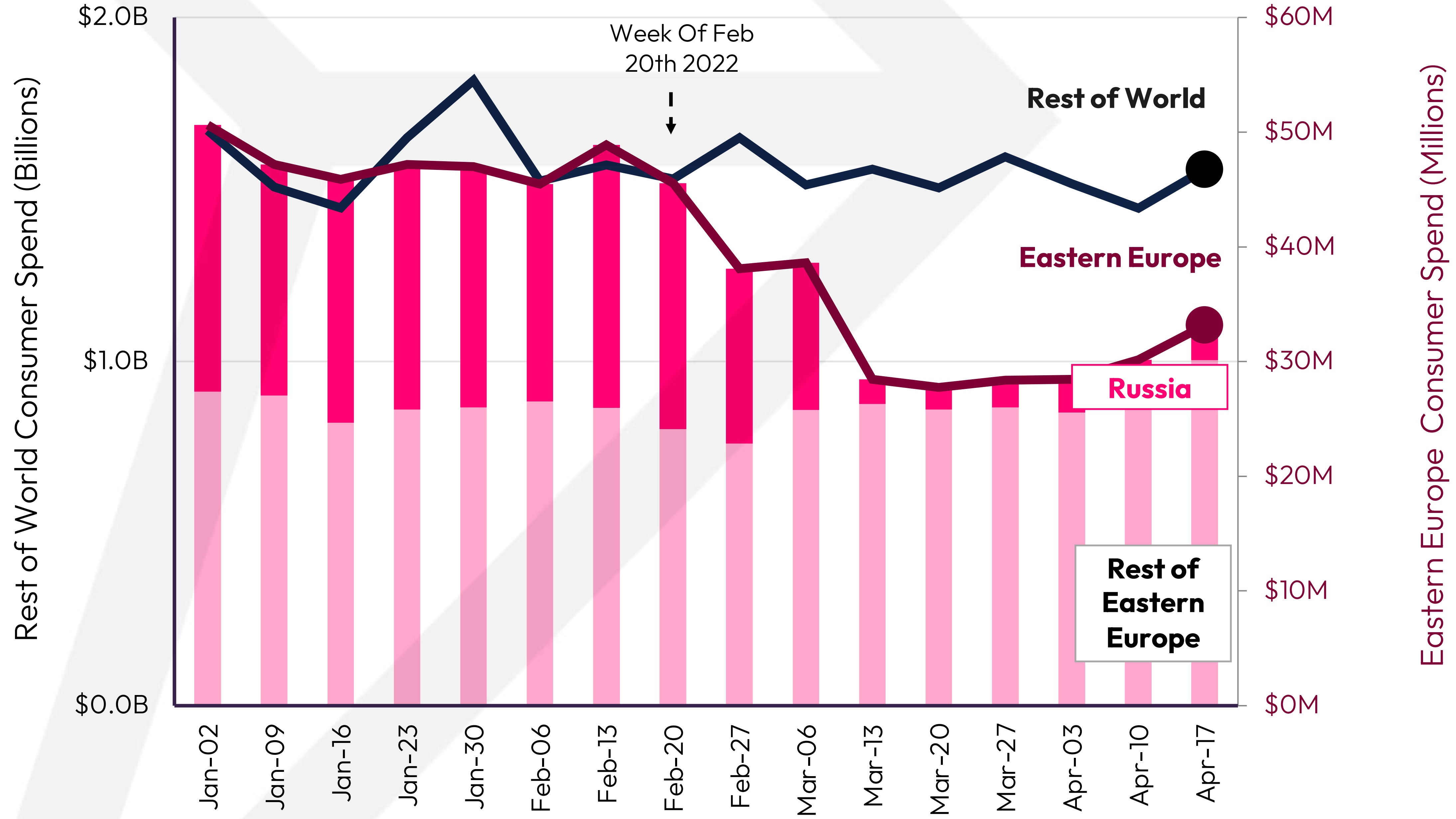
Weekly Mobile Game Downloads & Consumer Spend Saw Dip in Eastern Europe Amidst Macro Climate

Russia's Regional Share In Consumer Spend Dropped from 50% to 10% From February 2022

Weekly Mobile Games Downloads by Region 2022 to Date



Weekly Mobile Games Consumer Spending by Region 2022 to Date



Analyze Regional Market Movements in data.ai's Market Sizing Report

Source: data.ai. Note: Downloads and Consumer Spend across iOS, Google Play. iOS Only for China; Spend is gross — inclusive of any percent taken by the app stores

Core Games Still Dominate, But Shifting Player Preferences Gave Way to Emerging Game Genres on Mobile

- **Core Games** with real-time online features such as **PvP (player-versus-player)** among the most popular genre across the gaming spectrum, with **Battle Royale and Shooting Games** having a high presence on Mobile and PC charts. On **Mobile, genre preferences are more varied,** with 8 distinct subgenres being represented among the top 10 games — proof of mobile's increasing acceptance as a primary gaming platform as well as the ability to capture new audiences.
- **Cross-play features are becoming increasingly prominent in the top games** — the ability to access the same game progress across devices (whether on mobile or console, for instance) appears to be on the rise, as is playing against players using different platform versions of the same game.

Learn More: Uncover the Most Popular Games By Market and how data.ai's Game IQ taxonomy transforms how you publish games today.

Top 10 Worldwide Grossing Mobile, Handheld + PC Games by Platform Q1 2022

Powered by data.ai Game IQ

Rank	Mobile Gaming	Nintendo Switch Lite	Steam (2021)
1	**Genshin Impact** miHoYo, China *Game IQ Subgenre: Open World RPG*	**Pokémon Legends: Arceus** Pokémon Co. / Nintendo, Japan *RPG – Action*	**NARAKA: BLADEPOINT** NetEase, China *Action – MMO Adventure*
2	**ROBLOX** Roblox, United States *Creative Sandbox*	**Kirby and the Forgotten Land** Nintendo, Japan *Platformer - Action*	**Battlefield 2042** Electronic Arts, US *First Person Shooter – Multiplayer Action*
3	**Honour of Kings** Tencent, China *MOBA - Action*	**Mario Kart 8 Deluxe** Nintendo, Japan *Racing - Multiplayer*	**Grand Theft Auto V** Rockstar Games, US *Open World Action – Adventure*
4	**Candy Crush Saga** King/Activision Blizzard, UK *M3-Saga*	**Mario Party Superstars** Nintendo, Japan *Party - Multiplayer*	**Dota 2** Valve Corp., US *MOBA - Strategy*
5	**Game For Peace** Tencent, China *Battle Royale - Shooting*	**Triangle Strategy** Square Enix, Japan *RPG - Strategy*	**Counter-Strike: Global Offensive** Valve Corp., US *First Person Shooter – Multiplayer Action*
6	**Coin Master** Moon Active, Israel *Luck Battle - Party*	**Animal Crossing: New Horizons** Nintendo, Japan *Simulation*	**New World** Amazon Games, US *MMORPG*
7	**Uma Musume Pretty Derby** Cygames/CyberAgent, Japan *Idol Training Sim*	**Super Smash Bros. Ultimate** Nintendo, Japan *Fighting - Multiplayer*	**Valheim** Coffee Stain Studios, Sweden *Open World Survival - Adventure*
8	**Lineage W** NCSOFT, South Korea *MMORPG*	**The Legend of Zelda: Breath of the Wild** Nintendo, Japan *Action – Adventure*	**PUBG Battlegrounds** Krafton, South Korea *Battle Royale – Shooting*
9	**PUBG MOBILE** Tencent, China *Battle Royale - Shooting*	**Pokémon Brilliant Diamond / Shining Pearl** Pokémon Co. / Nintendo, Japan *RPG – Adventure*	**Destiny 2** Bungie, US *Open World Action – Multiplayer*
10	**Free Fire** Garena Online/Sea, Singapore *Battle Royale - Shooting*	**Super Mario 3D World + Bowser's Fury** Nintendo, Japan *Platformer - Action*	**Tom Clancy's Rainbow Six Siege** Ubisoft, France *Tactical Shooting – Multiplayer Action*

Source: data.ai & IDC. Note: data.ai mobile gaming rankings based on Combined iOS and Google Play; China is iOS only; Market-level rankings

Mobile Games That Defined 2021

Powered by data.ai Game IQ

Genshin Impact Open World (RPG)

- #1 game by worldwide consumer spend in March 2022 (#1 for the all 3 months in Q1 2022). #2 game by worldwide consumer spend in 2021.
- Launched in September 2020, available in over 174 markets around the world.
- 118 million downloads globally to date, $2.8 billion consumer spend globally to date. Top markets by downloads: United States, China, Brazil, Russia and Japan. Top markets by consumer Spend: China, the US, Japan, South Korea and Germany.
- Genshin Impact skews towards female gamers in Western markets like the US, UK, France, Brazil, Canada and Germany but towards males in APAC markets like Japan, South Korea and Taiwan.

Roblox Creative Sandbox (Simulation)

- Roblox can be considered as one of the biggest surprise or "sleeper" titles that has attained a leadership position of #1 by global game consumer spend in 2021, up from #16 in 2019. 2019 was also the first year the game managed to enter the top 20 global annual spend rank during its 10 years of existence.
- In fact, over 77% of Roblox's consumer spend to date was generated in the last 2 years (out of the 10 years it's been around).

Uma Musume Pretty Derby Idol Training (Simulation)

- #8 game by worldwide consumer spend in 2021, despite only being available in Japan. As of March 2022, it was the #6 Game by worldwide consumer spend.
- 7.9 million downloads to date, and $1.5 Billion consumer spend to date.
- In 2021, Idol Training Sim (Simulation) was #11 subgenre by consumer spend, at around $2.0 Billion or 2.4% of the Market in 2021, up 100% from $1.0 Billion the year prior.
- Other top games in this subgenre include *Ensemble Stars Music* ,*Project Sekai Colorful Stage! feat. Hatsune Miku* and *BanG Dream*.

Free Fire Battle Royale (Shooting)

- #1 game by worldwide downloads in 2021 and Q1 2022.
- #10 Game by worldwide consumer spend in Q1 2022.
- Launched in October 2017, available in over 169 markets around the world.
- 1.05 billion downloads globally to date, and $2.1 billion consumer spend globally to date. Top markets by downloads: India, Brazil, Indonesia, Vietnam and Mexico. The top markets by consumer Spend: the US, Thailand, Brazil, Indonesia and Mexico.

Learn More: Uncover the Top Mobile Games by Market

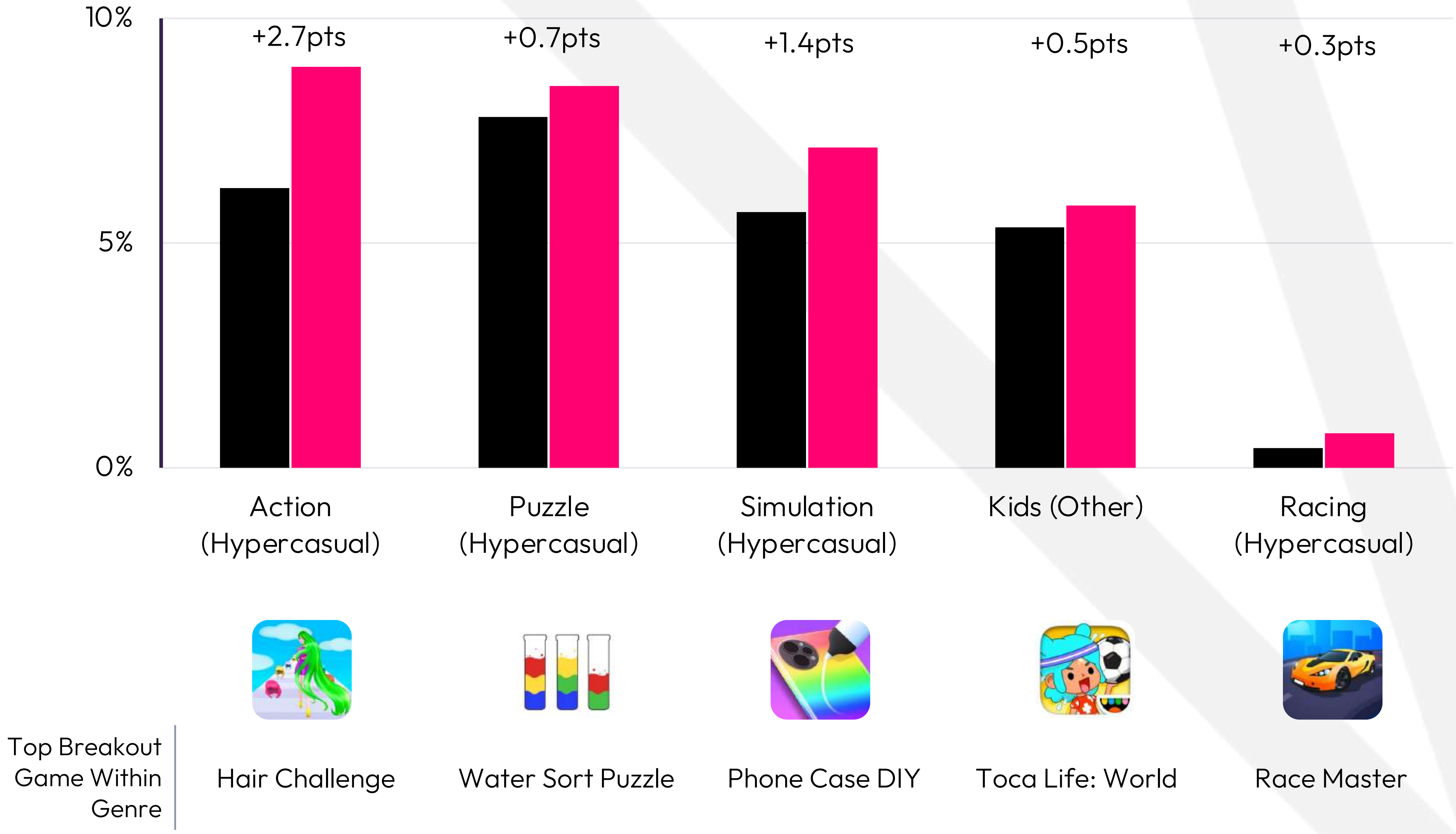
Source: data.ai Note: iOS, Google Play Combined. China is iOS only.
Genre breakdown based on data.ai Game IQ Taxonomy as of May 25th, 2022; Lifetime to date as of May 9, 2022.

Appetite for Easy-to-Play Hypercasual & Simulation Games Surged in 2021

4x March-Battle Strategy Games Emerged as the Most Monetizable Genre for Mobile Games, While Open World RPG Saw the Biggest Rise in Consumer Spend Market Share

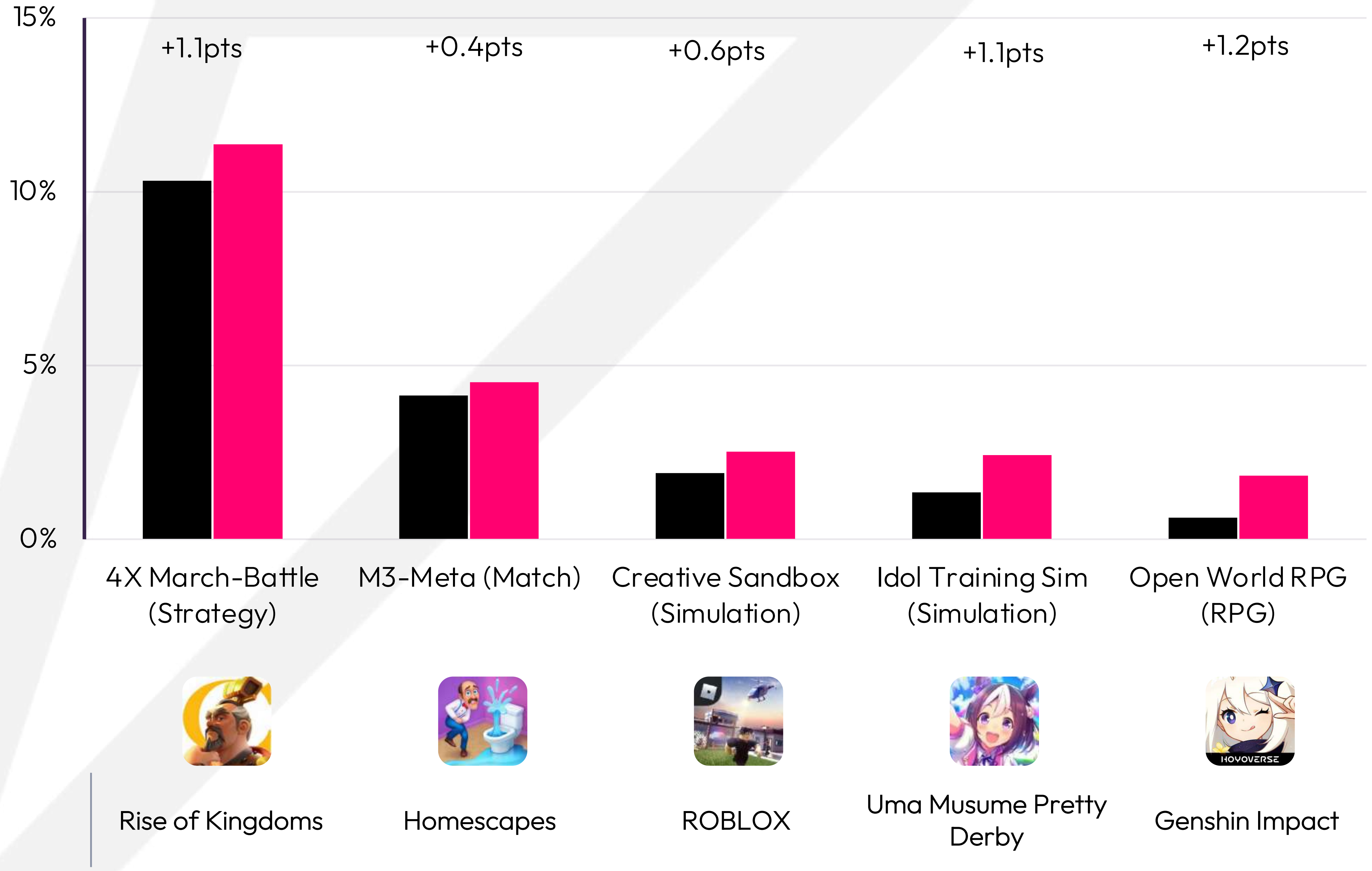
Powered by data.ai Game IQ

Top 5 Game Genres By Growth in Downloads Share 2021 vs 2020



Powered by data.ai Game IQ

Top 5 Game Genres By Growth in Consumer Spend Share 2021 vs 2020



Analyze More Genres in data.ai's Game IQ Market Sizing Report

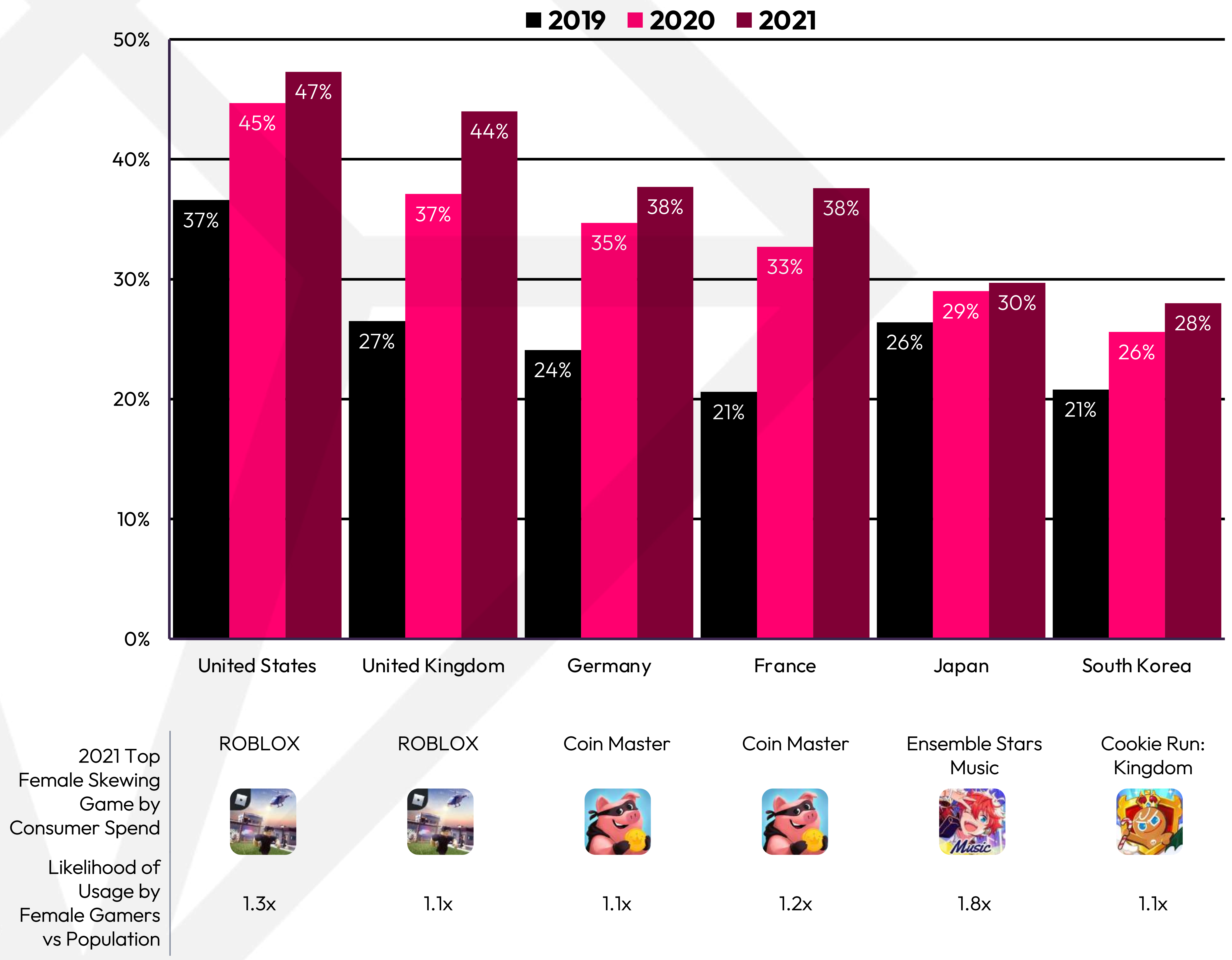
Source: data.ai. Note: Downloads and Consumer Spend across iOS, Google Play. iOS Only for China

Growing Inclusivity: Nearly 50% of Top Games by Consumer Spend in the US Skew Female

- Looking deeper into the demographic tendencies across top Games by consumer spend in select markets revealed the **growing prominence of games that lean towards female audiences**. For example, among the top 1000 Games in the United States in 2021, 47% of them skew towards female audiences, meaning females are more likely than males to play these games. This was up from 37% two years prior (10 percentage points or +50%).
- Looking at some of the top female-skewing games by consumer spend, *ROBLOX* users were 30% more likely to be females than males in the US, whereas users of *Ensemble Stars Music* in Japan were as high as 80% more likely to be female.

data.ai's audience index can further show you where the specific demographic group is engaging on mobile. Dive Deeper into Genre Demographics in the Genre Summary Report.

Share of Female-Skewing Games Among Top 1,000 Games by Consumer Spend iOS & Google Play Combined



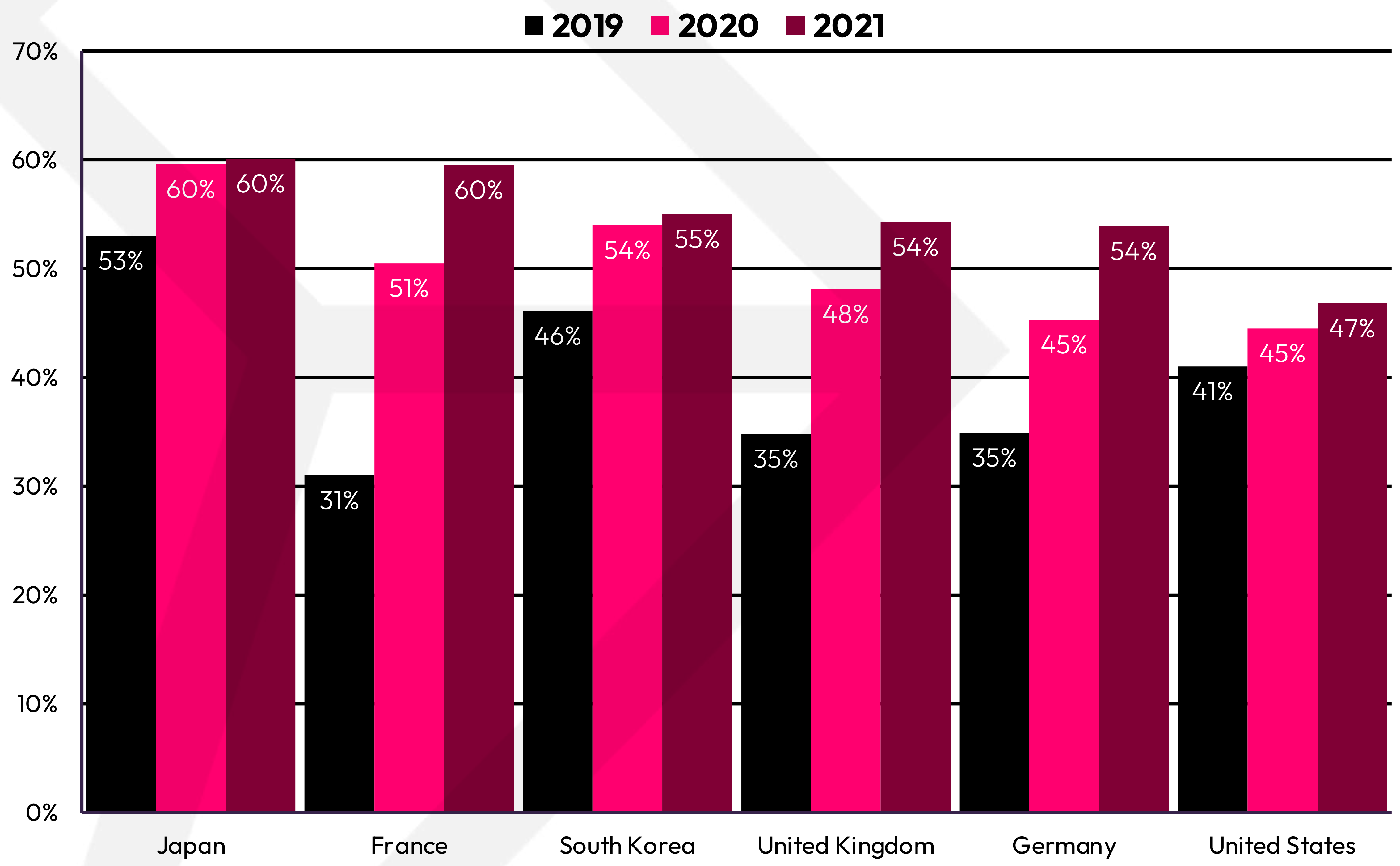
Source: data.ai. Note: Consumer Spend across iOS, Google Play. iOS Only for China, inclusive of app store fees; Gender skew determined by average demographic usage across iPhones and Android phones; Analysis is limited to males and females only and is not representative of all gender identities.

Gen Z is Rapidly Gaining Ground as the Most Monetizable Audience Group for Gaming

- Across the markets analyzed, apart from the United States, more than half of the top 1000 games by consumer spend leaned towards Gen Z users, and the share has been growing over the past two years as high as 29 percentage points (+94%).
- Not only is *ROBLOX* a clear favorite among Gen Z, it also has higher tendency to be played by female audiences. *Cookie Run: Kingdom* has enjoyed widespread popularity in South Korea, and it is 130% more likely to be used by Gen Z.

Understanding demographics segmentation can help you build out marketing campaigns and partnerships for games with demographics that match your target audience. View the most used games by age group in data.ai over time, by device and in different markets.

Share of Gen Z-Skewing Games among Top 1,000 Games by Consumer Spend iOS & Google Play Combined



	Japan	France	South Korea	United Kingdom	Germany	United States
2021 Top Gen Z Skewing Game by Consumer Spend	Uma Musume Pretty Derby	Brawl Stars	Cookie Run: Kingdom	ROBLOX	State of Survival	ROBLOX
Likelihood of Usage by Gen Z Gamers vs Population	2.2x	2.3x	2.3x	1.7x	1.3x	1.9x

Source: data.ai. Note: Consumer Spend across iOS, Google Play. iOS Only for China, inclusive of app store fees; Demographic skew determined by average demographic usage across iPhones and Android phones; Gen Z represents aged 16-24

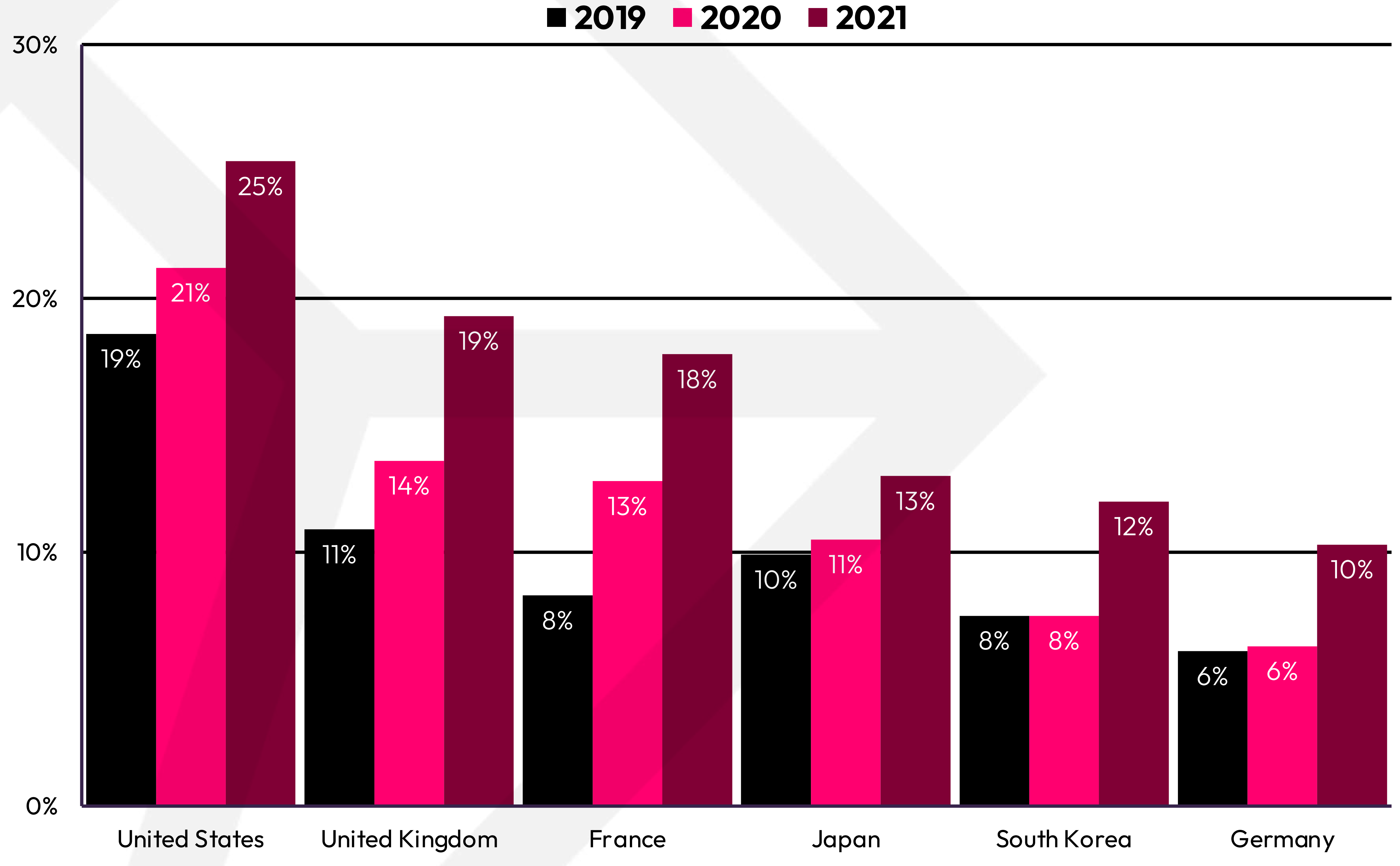
Growth in Older Gamers: Gen X & Baby Boomers Have Also Seen Steady Growth in Mobile Game Spending

- The US represents a unique market compared to other top mobile gaming markets: games that skew towards Gen X / Baby Boomers (aged 45+) represent nearly 25% of the top grossing games and growing each year, up 6 percentage points from 2019 (+30%) — **the fastest growing cohort in the US.**

- Gaming is not just for young mobile-savvy Gen Z. **Mobile has enabled gaming to go mainstream and permeate every age cohort** — with engagement and spend up among older gamers, which tend to have more available disposable income, and possibly more time if in retirement. In fact, Baby Boomers & Gen X are the wealthiest age groups in the US — controlling 80% of wealth.

Understanding demographics segmentation can help you identify underserved markets and cater to growing segments. View the most used games by age group in data.ai over time, by device and in different markets.

Share of Gen X/ Baby Boomers-Skewing Games Among Top 1,000 Games by Consumer Spend iOS & Google Play Combined



	United States	United Kingdom	France	Japan	South Korea	Germany
2021 Top Boomers Skewing Game by Consumer Spend	Candy Crush Saga	Candy Crush Soda Saga	Candy Crush Soda Saga	Toon Blast	Lineage 2M	Fishdom: Deep Dive
Likelihood of Usage by Boomers Gamer vs Populations	1.9x	1.7x	2.3x	2.2x	2.3x	1.3x

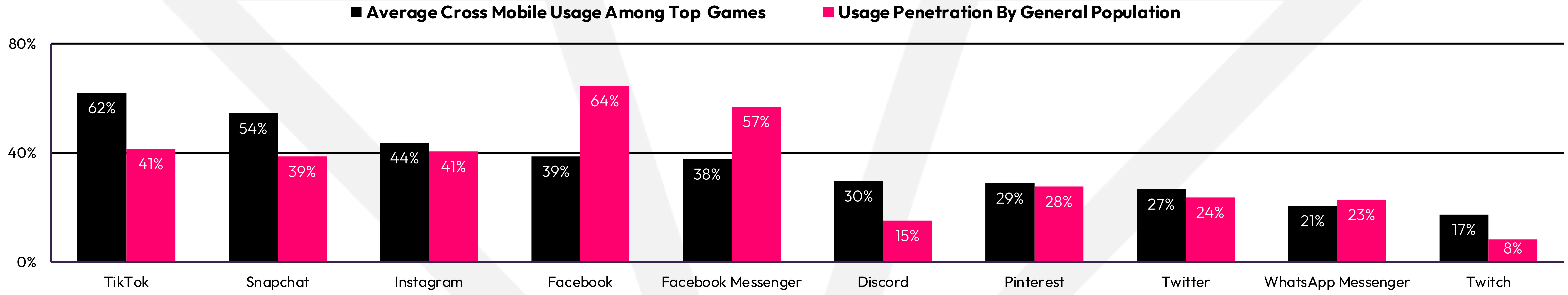
Source: data.ai. Note: Consumer Spend across iOS, Google Play. iOS Only for China, inclusive of app store fees; Demographic skew determined by average demographic usage across iPhones and Android phones; Gen X/ Baby Boomers represents aged 45+

Game Audiences Tend to Over-Index on Gaming-Focused Social Media Platforms such as Discord, Discussion and Video Streaming Apps like TikTok and Twitch, More than the General Population

Powered by App IQ

Top Social Media and Video Streaming Apps by Average Cross Usage Among Top 10 Games by MAU

2021, United States, iPhone



Gamer Likelihood to Use Social App vs Avg Population

1.49x	1.41x	1.08x	0.60x	0.66x	1.96x	1.04x	1.13x	0.90x	2.09x

Streaming: Gaming-Focused Twitch Made Up Almost Half of Global Live-Streaming Time Spent on Mobile

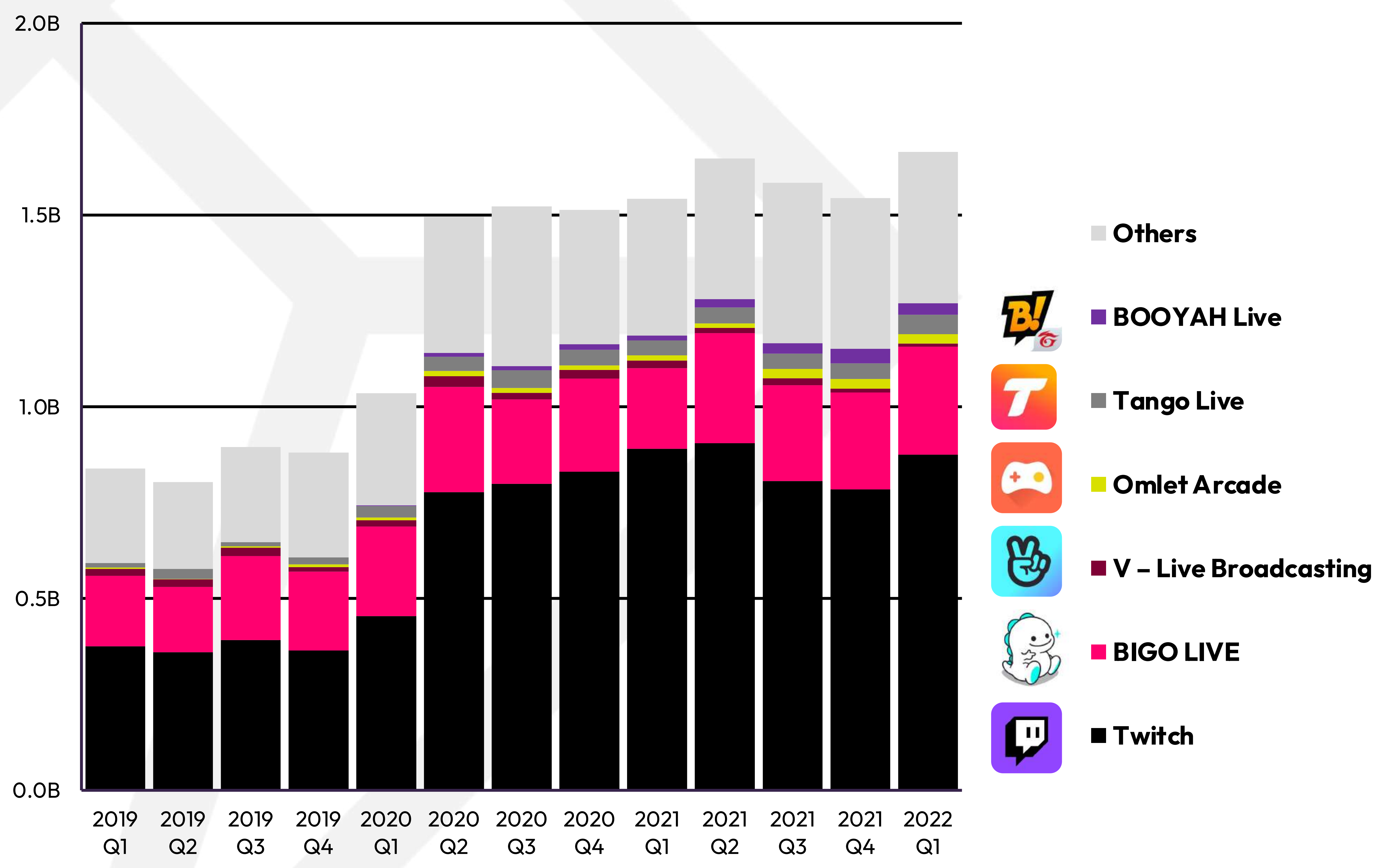
- Gaming is set to underpin the future landscape of video streaming apps. Since the pandemic, gaming-focused platforms such as *Twitch*, *Omlet Arcade* and *BOOYAH Live* saw accelerated growth in engagement by prioritizing community building features that encourage real-time connection and interactions between game streamers and audience.
- While *Twitch* initially rose to popularity for gaming content, more consumers than ever are turning to *Twitch* for connection outside of game streams, with non-gaming category *'Just Chatting'* on the platform seeing more viewers than any other game title.

Keep track of subgenre movement and top players by subgenre in data.ai's App IQ.

Powered by data.ai App IQ

Worldwide Time Spent on Live Streaming Apps

Android Phones



Source data.ai;Total Time Spent on Live-Streaming (Entertainment) apps according to data.ai App IQ Primary Taxonomy as of 30th April 2022. Worldwide, Android Phone, excluding China.

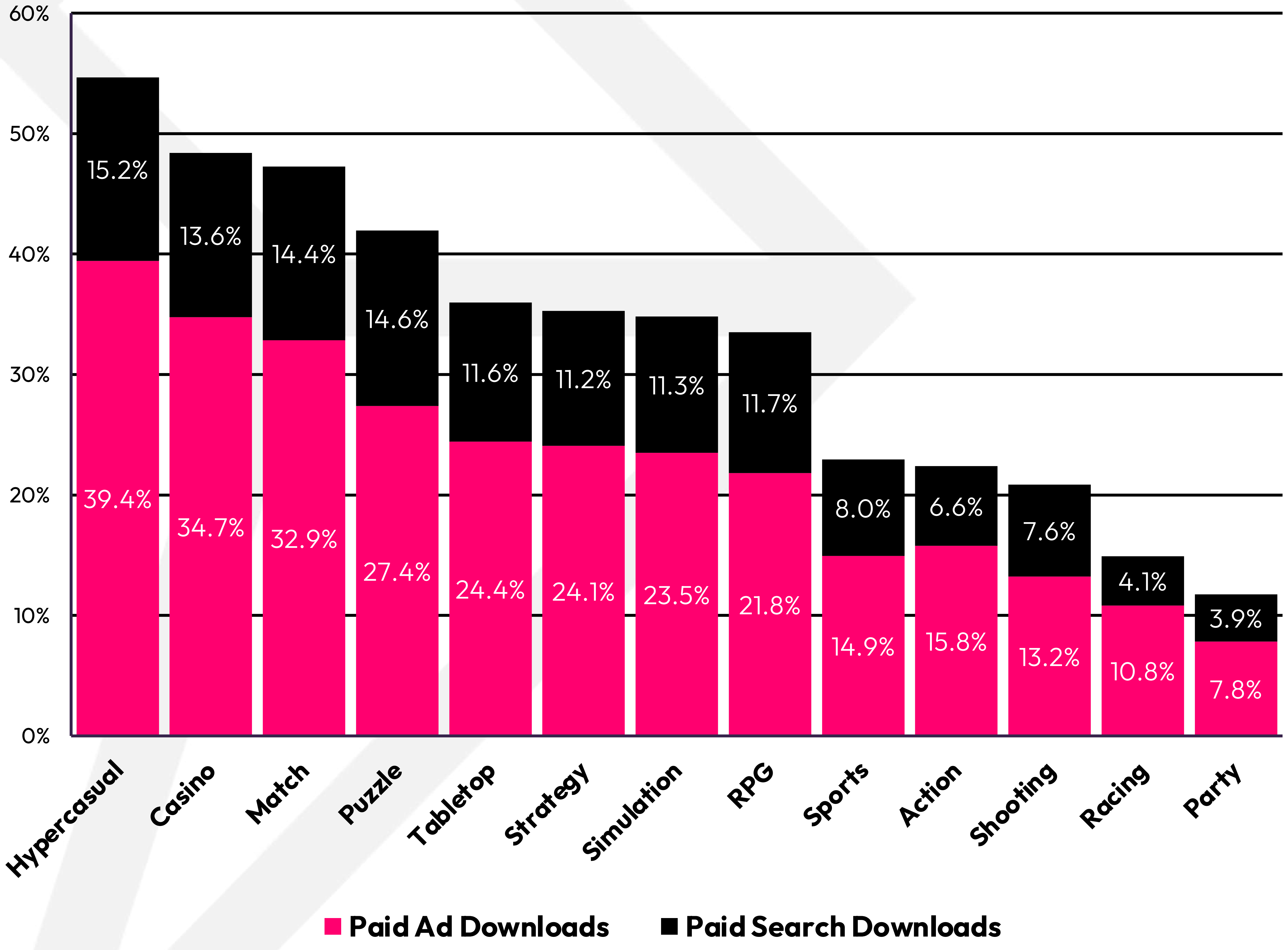
Paid User Acquisition: Hypercasual, Casino & Match Games Generate the Largest Share of Their Downloads from Paid Channels

- The market benchmarks for paid downloads vary by both game genre and country. Some genres are more likely to require paid promotion than others. Overall, Paid App Install Ads (vs Paid App Store Search) tends to contribute more of the share of paid downloads.
- Paid downloads indicate the both the level of UA activity and when competitors are running burst campaigns.

Uncover the right user acquisition channels for your game: those that will bring in the most revenue and capture growing, engaged mobile markets.

Powered by data.ai Game IQ

Share of Game Downloads From Paid Sources
Average of Top 100 Games Per Genre in Q1 2022, United States



Source: data.ai
Note: Downloads across iOS, Google Play.

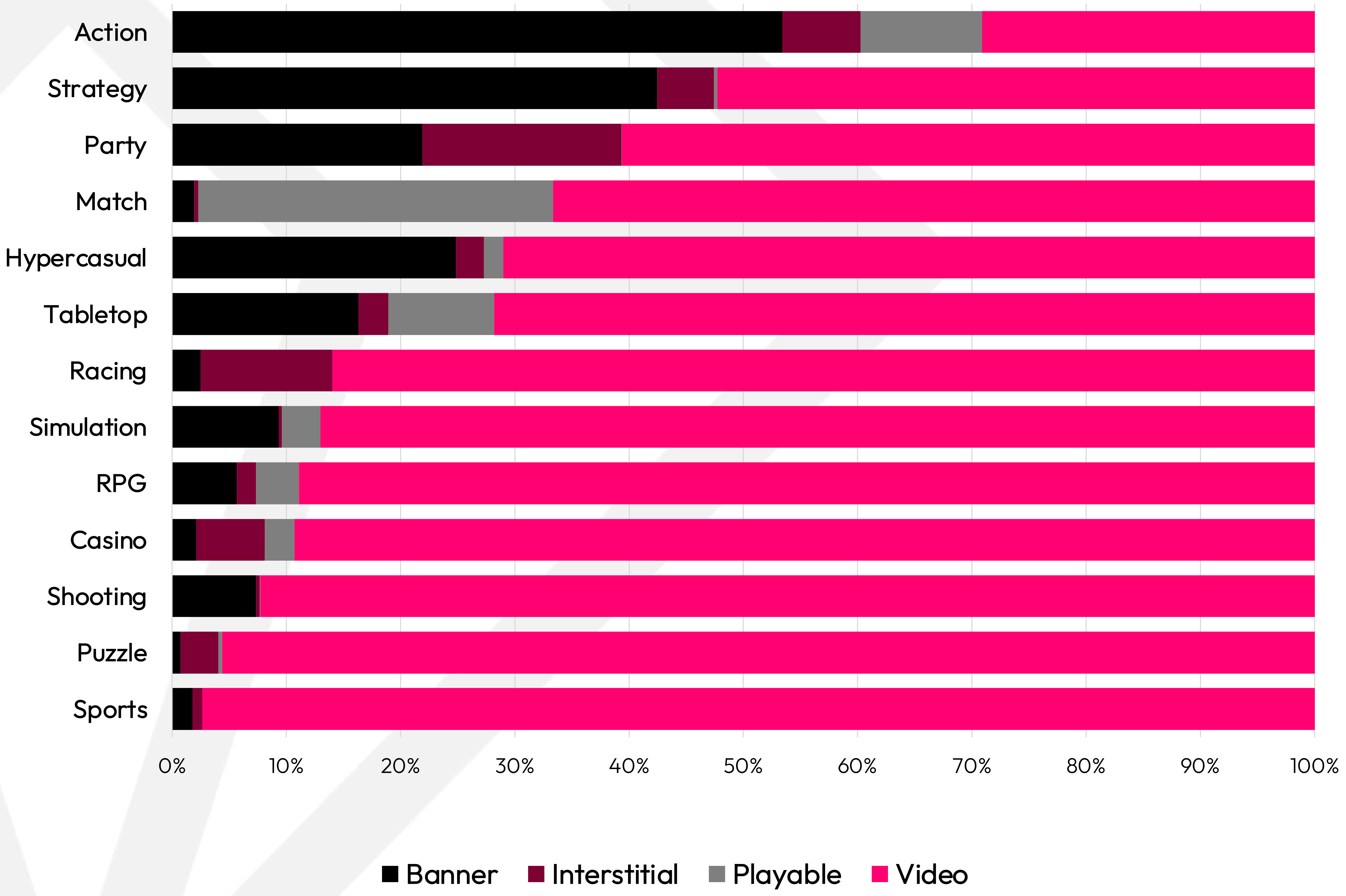
Mobile UA Ad Formats: Match and Action Games Lead in Share of Impressions By Playable Ads

- In terms of user acquisition ad formats, **Video Ads dominate most game subgenres,** apart from Action Games — where banner ads represented nearly 55% of Share of Voice (SOV) for the advertiser, indicating a successful ad type for that subgenre.
- **Match Games also bucked the trend with the highest share of Playable Ads represented 31% of all SOV** — indicating they tend to perform well with viewers and lead to game downloads. This could be due to the simple gameplay mechanics. Viewers can achieve the satisfaction of a 'match' in a playable ad to quickly get a sense of the game and subsequently download the game quickly (the main metric of a successful ad).

Discover which creatives and ad formats perform best across varying ad networks and markets.

Powered by data.ai Game IQ

Share of Advertising SOV by Format Among Top 20 Games By Downloads per Genre
United States, iPhone, March 2022



Source: data.ai
Note: Downloads across iOS, Google Play

GAMING SPOTLIGHT 2022

AD MONETIZATION + USER PREFERENCES IN MOBILE GAMES

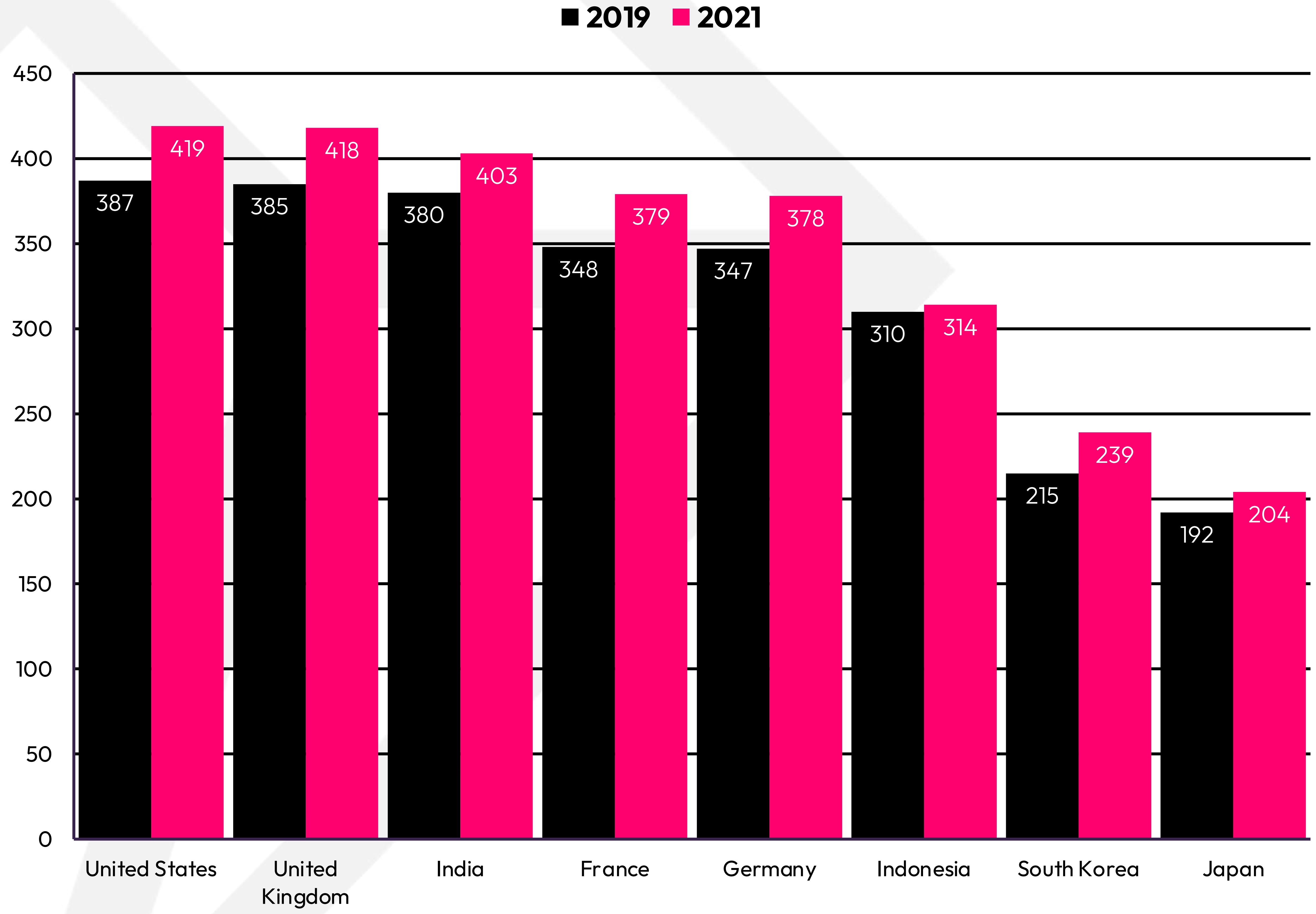
Go Beyond In-App Purchases: Hybrid Ad Monetization is a Growing Trend Among Top Grossing Games

- Among top games by app store consumer spend (those that monetize through in-app purchases) in United States, games also monetizing through ads has increased from 39% in 2019 to 42% in 2021.
- Compared to other markets, game publishers in APAC markets such as Japan and South Korea prioritized the in-app purchase model (IAP) over the in-app advertising model.

There are opportunities for game publishers to diversify income sources without interfering with the players' gaming experiences. Hybrid models are particularly popular in Western markets. Dive deeper with data.ai Game IQ feature tags.

Powered by data.ai Game IQ

Number of Games with Hybrid IAP+ Ad Monetization
Among Top 1,000 Grossing Games in Select Markets

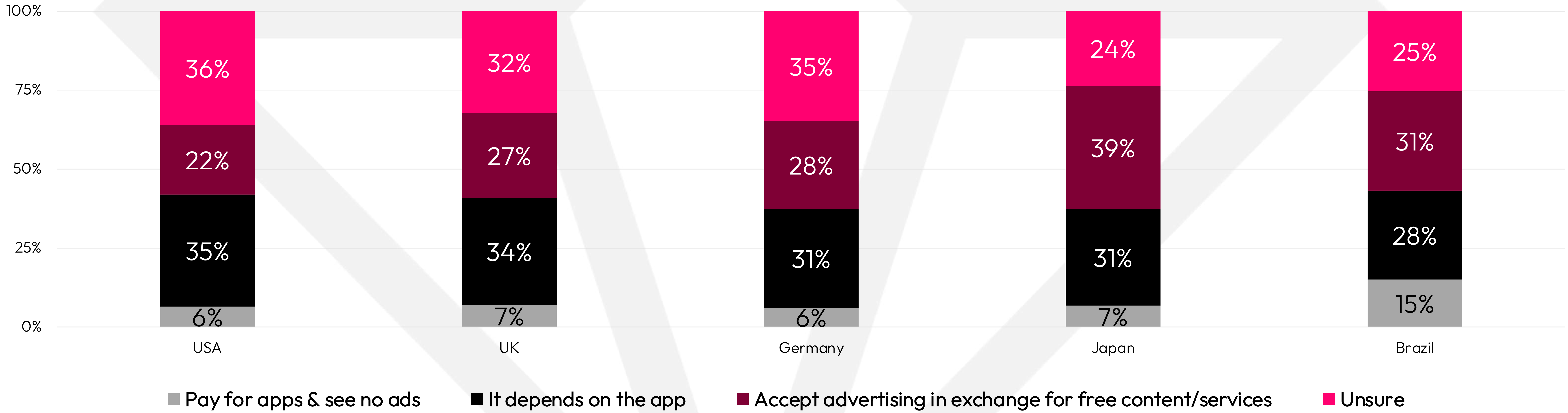


Source data.ai. Top 1000 Games by Consumer Spend across iOS, Google Play; inclusive of app store fees

Most Mobile Device Users Were Willing to Accept Advertising in Return for Free Content & Services

By >3:1 margin, on average, consumers indicated they'd rather see ads in exchange for free content/services than to pay for apps and avoid all ads indicated by "Accept Ads" vs "Pay for apps & see no ads" responses. Those that responded with "It depends" or "Accept ads" exceeded 50% in each market — signaling full or partial acceptance of ads in exchange for services.

Share of Mobile Users Willing To Pay For Apps Versus Seeing Ads For "Free" Apps



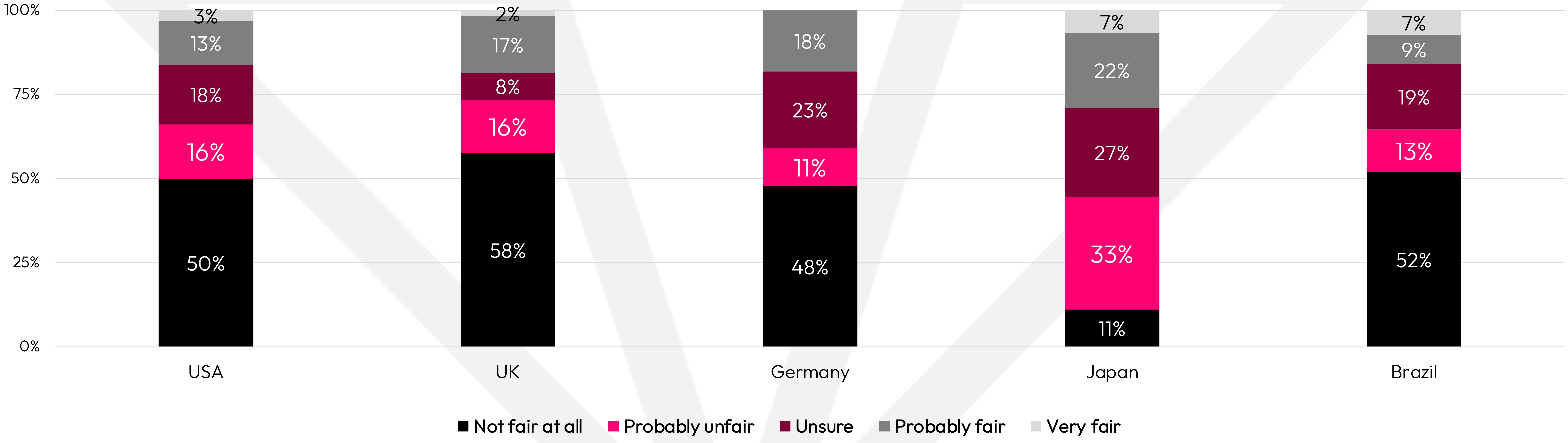
Q: Many apps run advertising to earn money so they can offer content or services for free. If you could choose, which would you rather do?

n = 1,052 for the U.S., 1,146 for the UK, 1,189 for Germany, 1,375 for Brazil, and 232 for Japan (base is smartphone users).
Source: November 2021 IDC/LoopMe Survey On Mobile Advertising Perceptions.

Most Users Felt Tracking for Ad Targeting Was Unfair Even if Targeting Helped to Keep Apps Free

The exception was Japan; most respondents there felt tracking was "fair" or they were neutral towards it. Coupled with the results of the previous question, this puts app developers in a tough spot and implies Apple's IDFA deprecation was pragmatic: most mobile users don't want to be tracked individually and they want "free" apps. This underscores the importance of having trustworthy third-party contextual market data to inform successful mobile strategies in a post-IDFA world.

Share of Mobile Users' Perception Of Ad Targeting Tracking



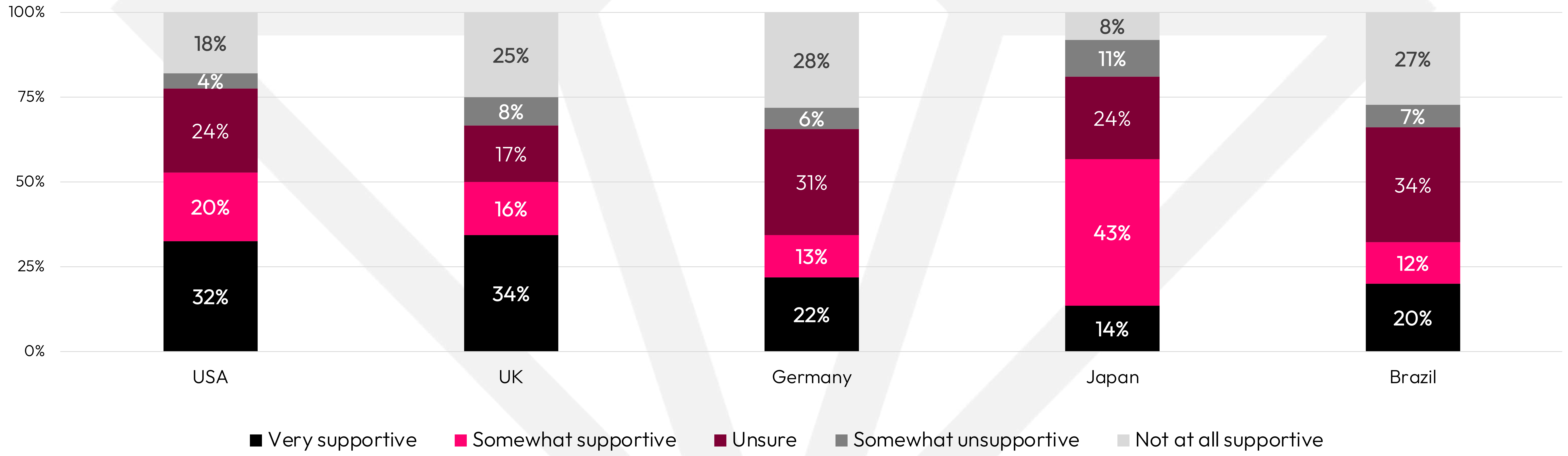
Q: Keeping in mind it allows most apps to be free, how fair do you think it is for app publishers to track you?

n = 1,052 for the U.S., 1,146 for the UK, 1,189 for Germany, 1,375 for Brazil, and 232 for Japan (base is smartphone users).
Source: November 2021 IDC/LoopMe Survey On Mobile Advertising Perceptions.

On Average, 45% of Respondents Supported Tougher Ad Tracking Measures

This could be private or public policy changes; 29% didn't support such measures, which implies probabilistic ad tracking will become the "new normal". Marketers and product managers will need to unify contextual third-party data with first-party metrics to future-proof their ad strategy.

Share of Mobile Users' Support for Privacy Regulations or Policies



Q: Even if it means you'll see more ads that are less relevant to you, how much do you support the steps tech companies and governments have taken to make tracking harder?

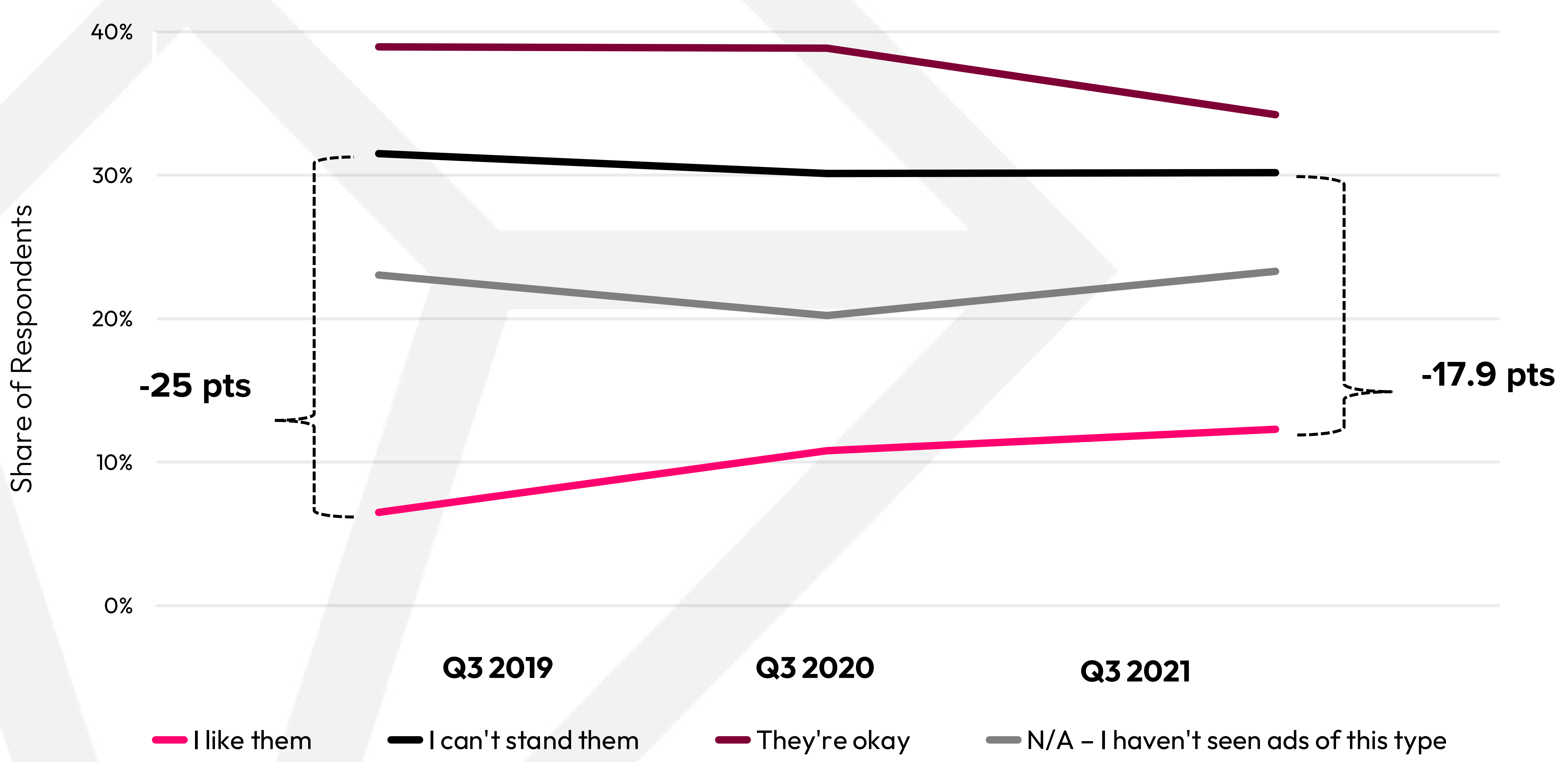
n = 1,052 for the U.S., 1,146 for the UK, 1,189 for Germany, 1,375 for Brazil, and 232 for Japan (base is smartphone users).
Source: November 2021 IDC/LoopMe Survey On Mobile Advertising Perceptions.

Banner/ Display Ads

US Gamer Sentiment Towards In-Game Banner Ads Has Grown More Positive, Although the Unfavorable Share Remains Elevated

- About 18% more US gamers said they "can't stand" banner/display ads than said they "liked" them in Q3 2021, but the gap between these sentiments closed (improved) 1.4% between Q3 2020 and Q3 2021.
- **Why this sentiment change occurred is open to interpretation:** did the COVID-19 pandemic make more gamers receptive to such ads, did game developers and their ad network partners improve the ad experience (more relevant, less faulty), or have the messages gotten better?
- Roughly 77% of respondents reported seeing an in-game banner/display ad in Q3 2021.

US Mobile Gamer Sentiment Towards Banner/Display Ads, Q3 2019 to Q3 2021



Q: If you've seen in-game ads in the mobile games you've played in the past three months, can you indicate what type you've seen and your attitude towards them? [Option selected:] I've seen static banner (picture or text) ads and...

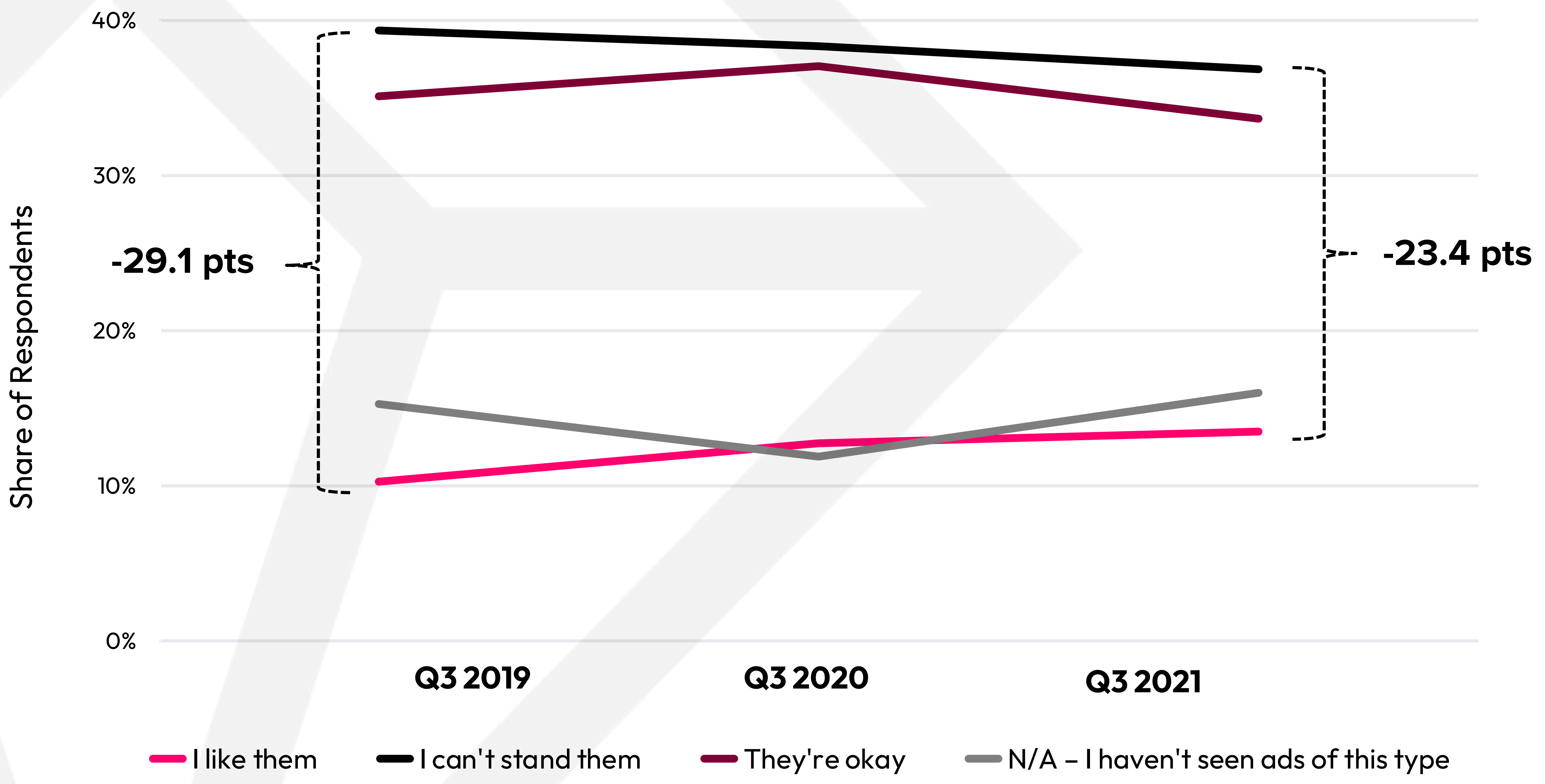
Q3 2021 n=3,988
Source: IDC's Q3 2019, 3Q 2020 and 3Q 2021 US Gamer Surveys

Video Ads

In-Game Video Ads Remained the Most Divisive Format but US Gamer Sentiment Toward Them Improved Marginally

- About 23% more US gamers said they "can't stand" video ads than said they "liked" them in Q3 2021. However, the gap between these sentiments also closed (improved) 1.6% between Q3 2020 and Q3 2021.
- Video ads had the highest presence of all formats: about 84% of mobile gamers reported seeing an ad of this type in a game they played in Q3 2021.
- **Video ads had the highest negative sentiment among the four in-game ad formats considered; their sheer prevalence (as seen in slide 17) probably partly explains this outcome.**

US Mobile Gamer Sentiment Towards Video Ads, Q3 2019-Q3 2021



Q: If you've seen in-game ads in the mobile games you've played in the past three months, can you indicate what type you've seen and your attitude towards them? [Option selected:] I've seen video ads and...

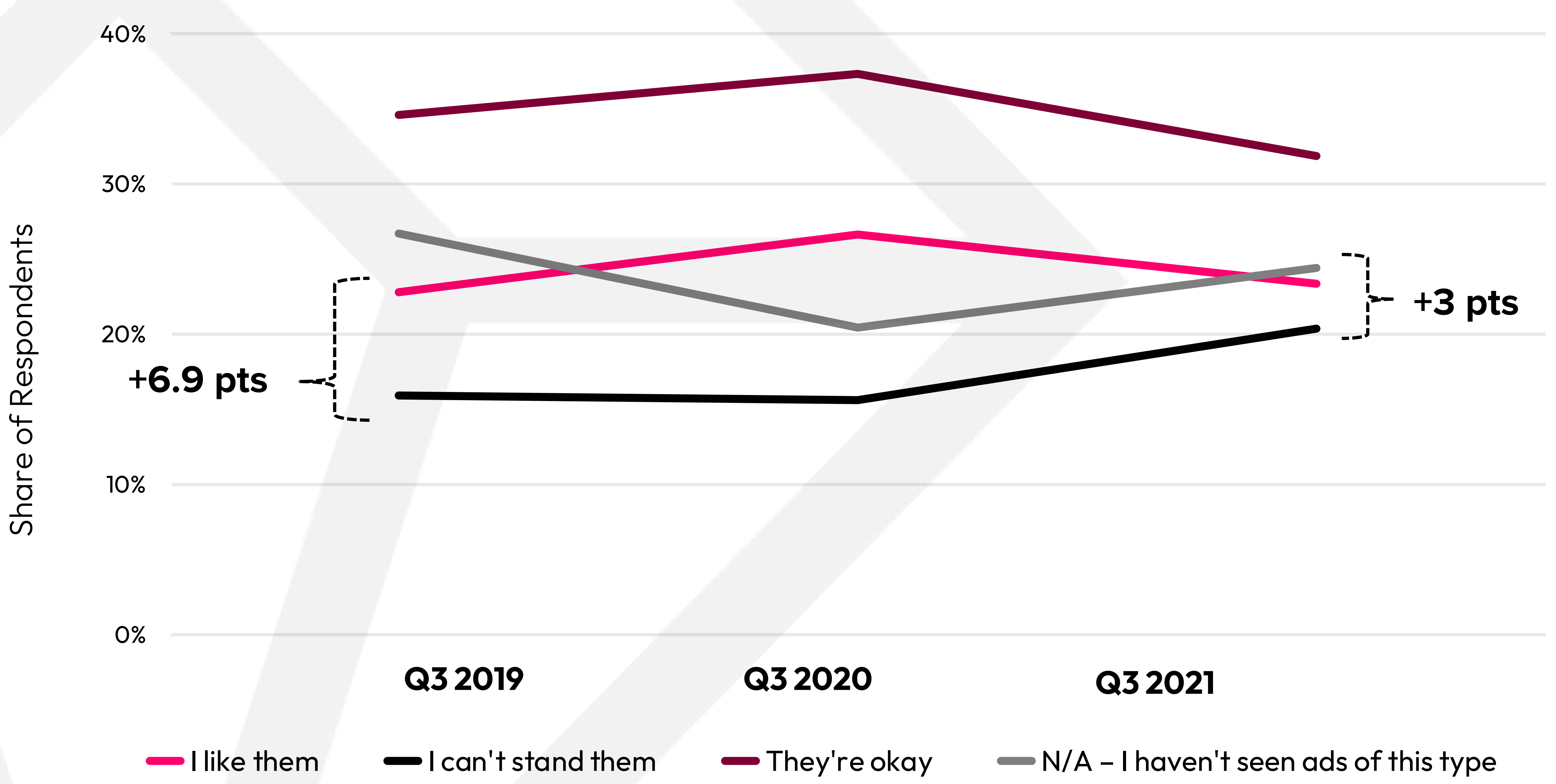
Q3 2021 n=3,988
Source: IDC's Q3 2019, 3Q 2020 and 3Q 2021 US Gamer Surveys

Rewarded Video Ads

US Gamers Reversed Course: Sentiment Dipped Year-on-Year Toward Rewarded Video Ads But They Still Leaned Positive Overall

- 3% more US gamers said they “liked” rewarded video ads than said they “can’t stand” them in Q3 2021, **indicating users are willing to part with their attention if it benefits their gameplay.**
- 76% of gamers reported seeing at least one ad of this type in a mobile game they played in 2Q 2021.
- **Rewarded video ads had the highest positive sentiment among all ad types** with 23% of gamers reporting that they “like them”, although year-on-year this share fell 8%; **the value exchange remains direct and immediate for rewarded video ads.**

US Mobile Gamer Sentiment Towards Rewarded Video Ads, Q3 2019-Q3 2021



Q: If you've seen in-game ads in the mobile games you've played in the past three months, can you indicate what type you've seen and your attitude towards them? [Option selected:] I've seen rewarded video ads (that I get virtual currency or items for watching) and...

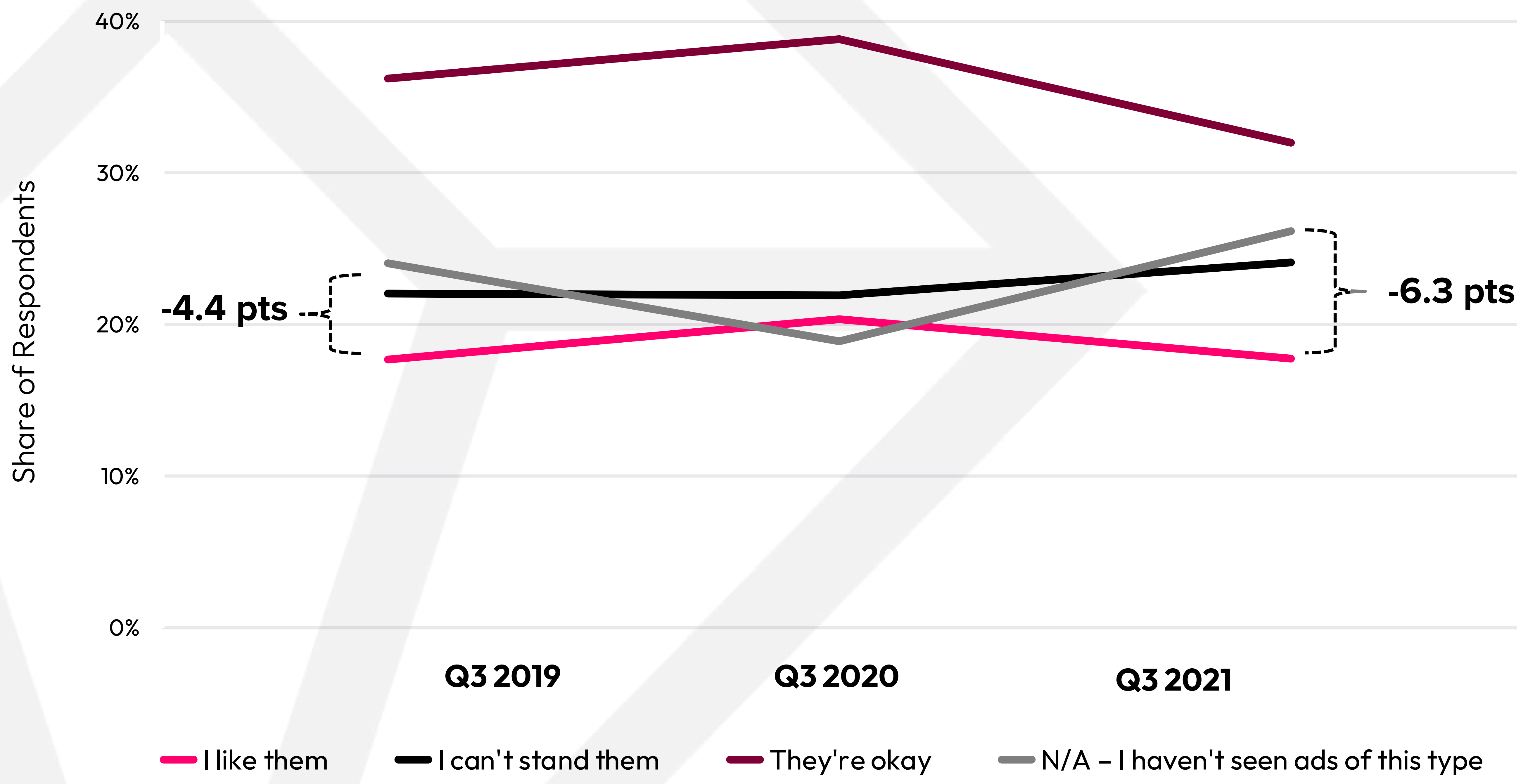
Q3 2021 n=3,988
Source: IDC’s Q3 2019, 3Q 2020 and 3Q 2021 US Gamer Surveys

Playable Ads

Playable Ads Were Close To Neutral, but US Gamer Sentiment Toward Them Dipped Year-on-Year

- About 6% more US gamers said they "can't stand" playable ads (which are typically designed to let a user test a game before a potential download) than said they "liked" them in Q3 2021, and the negative sentiment toward them rose 4.3% year-on-year.
- Playable ads had the second highest "like" share at 18%.
- This was the least common ad type, with 74% of respondents claiming to have seen at least one such ad in 3Q 2021.

US Mobile Gamer Sentiment Towards Playable Ads, Q3 2019-Q3 2021



Q: If you've seen in-game ads in the mobile games you've played in the past three months, can you indicate what type you've seen and your attitude towards them? [Option selected:] I've seen playable ads (that allow me to demo another game or app) and...

Q3 2021 n=3,988
Source: IDC's Q3 2019, 3Q 2020 and 3Q 2021 US Gamer Surveys

Video & Rewarded Video Ads

Gen Z & Female US Gamers Fueling Negative Sentiment Around In-Game Video Ads

- When ad sentiments were further broken down by age and gender, significant differences emerged.
- Shown at right **are video ads and rewarded video ads, which had the largest sentiment gap among the four types of ads** considered in 3Q 2021.
- The negative perception of video ads was much less pronounced among males aged 25-44 while the reverse was true for females aged 13-24; **both these results have implications for marketers**.
- For rewarded videos, there appeared to be an inverse correlation between age and favorability. **Males aged 13-24 appeared to have the highest "like" rate of all for rewarded video ads, which implies that games that appeal to this demographic group should especially adopt this ad type.**

US Mobile Gamer Net Sentiment by Type of In-Game Video Ad & Age Bracket, 3Q 2021

	Total	Aged 13-24	Aged 25-44	Aged 45+
Video ads	-23.4	-32.4	-10.9	-26.5
Rew. Video ads	3	14.2	10	-5
N value	3,989	768	1,101	2,102

US Mobile Gamer Net Sentiment by Type of In-Game Video Ad & Gender, 3Q 2021

	Total	Female	Male	Non-binary*
Video ads	-23.4	-27	-17.8	-38.5
Rew. Video ads	3	1	4.5	24.4
N value	3,989	2,231	1,680	78

Q: If you've seen in-game ads in the mobile games you've played in the past three months, can you indicate what type you've seen and your attitude towards them? [Option selected:] Video ads or Rewarded video ads – net difference between "like" and "can't stand them" results shown above

* Results warrant caution due to low n value (this includes LGBTQ respondents and a small number of respondents who declined to specify a gender)

Q3 2021 n=3,988
Source: IDC's Q3 2019, 3Q 2020 and 3Q 2021 US Gamer Surveys

GAMING SPOTLIGHT 2022

KEY THEMES + TAKEAWAYS

GAMING SPOTLIGHT 2022

Key Themes + Takeaways

- **Mobile is now the primary driver of growth** for digital games consumption, increasingly becoming the world's preferred form of gaming, and central to a robust cross-platform experience.
- Mobile has enabled the **democratization of gaming** — allowing for every type of gamer to gain access to "their" niche, whether it's a specific subgenre from hypercasual to match-3 to core games like open world adventure titles. **Mobile gaming appear to be setting the stage for the "new gamer", which is the most inclusive cohort yet.**
- Consumers have spent more time at home since early 2020 and have sought out new ways to connect with others; **we expect cross-platform games to continue gain ground relative compared to mobile-only games** — a trend that should put more console- and PC-quality experiences in the pocket of all smartphone owners.
- Sentiment towards in-game mobile ads generally improved in Q3 2021 especially compared to Q3 2019, according to US mobile gamer surveys. Not all ad formats were equally regarded. **Rewarded video and playable ads were gamers' preferred ad types in the US.**
- Oversaturation may be a problem for games that primarily monetize through ads. In the US, consumer opinion of in-game ads tended to fall as the prevalence of different types of ads rose, so **we recommend diversifying the types/formats of ads shown in-game.**
- **We recommend using demographics to assess the type and format of ad that has the most favorable sentiment among a given game's user base** to help combat "ad fatigue" – a challenge that's grown tougher since Apple's ATT Framework was rolled out (and we expect Google's comparable "Privacy Sandbox" will arrive in early 2024). Contextual market data is important for advertisers to succeed in this environment.

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