

Mobile Gaming Market Outlook 2022

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An Overview & Analysis of Industry Trends

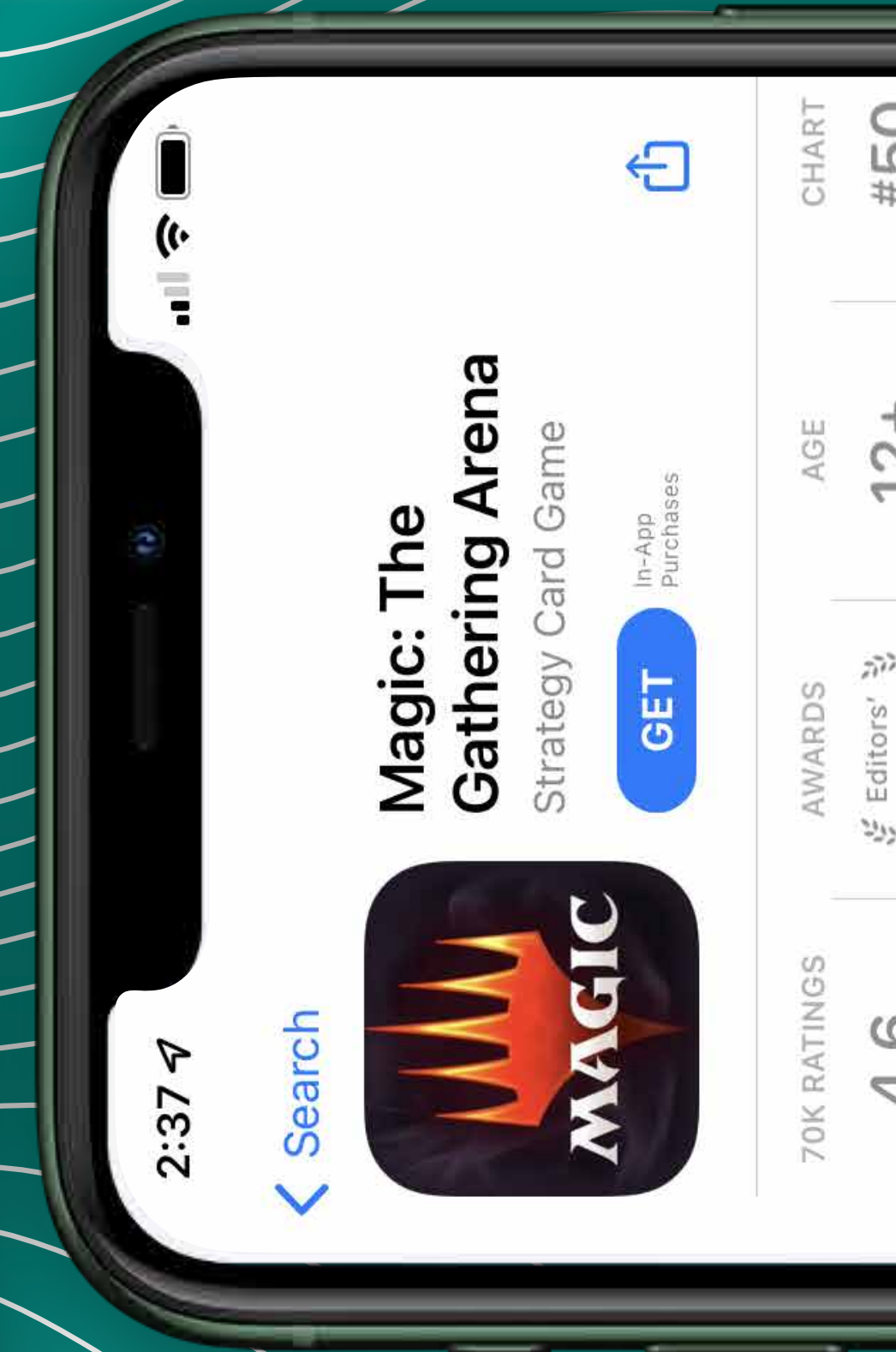
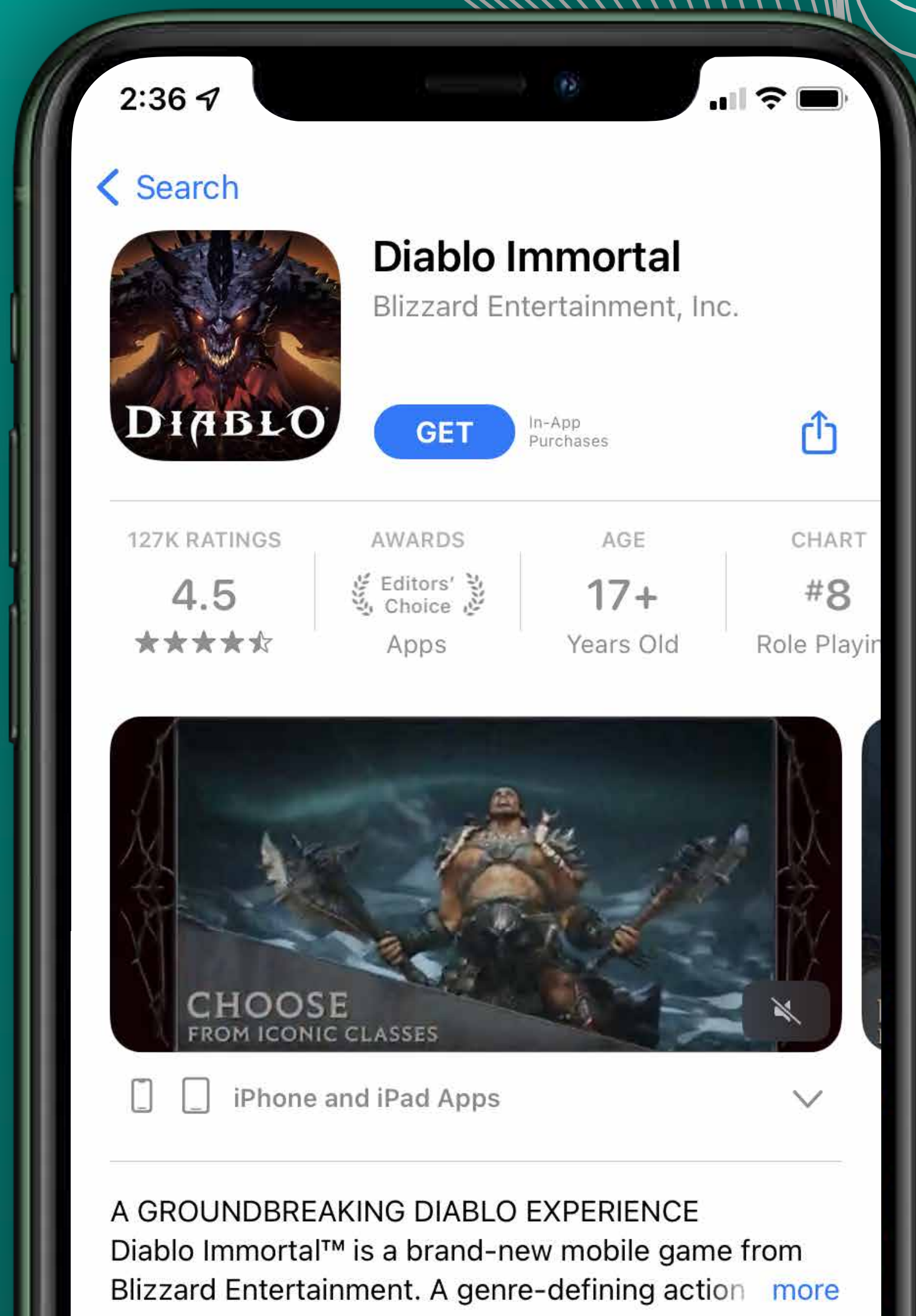
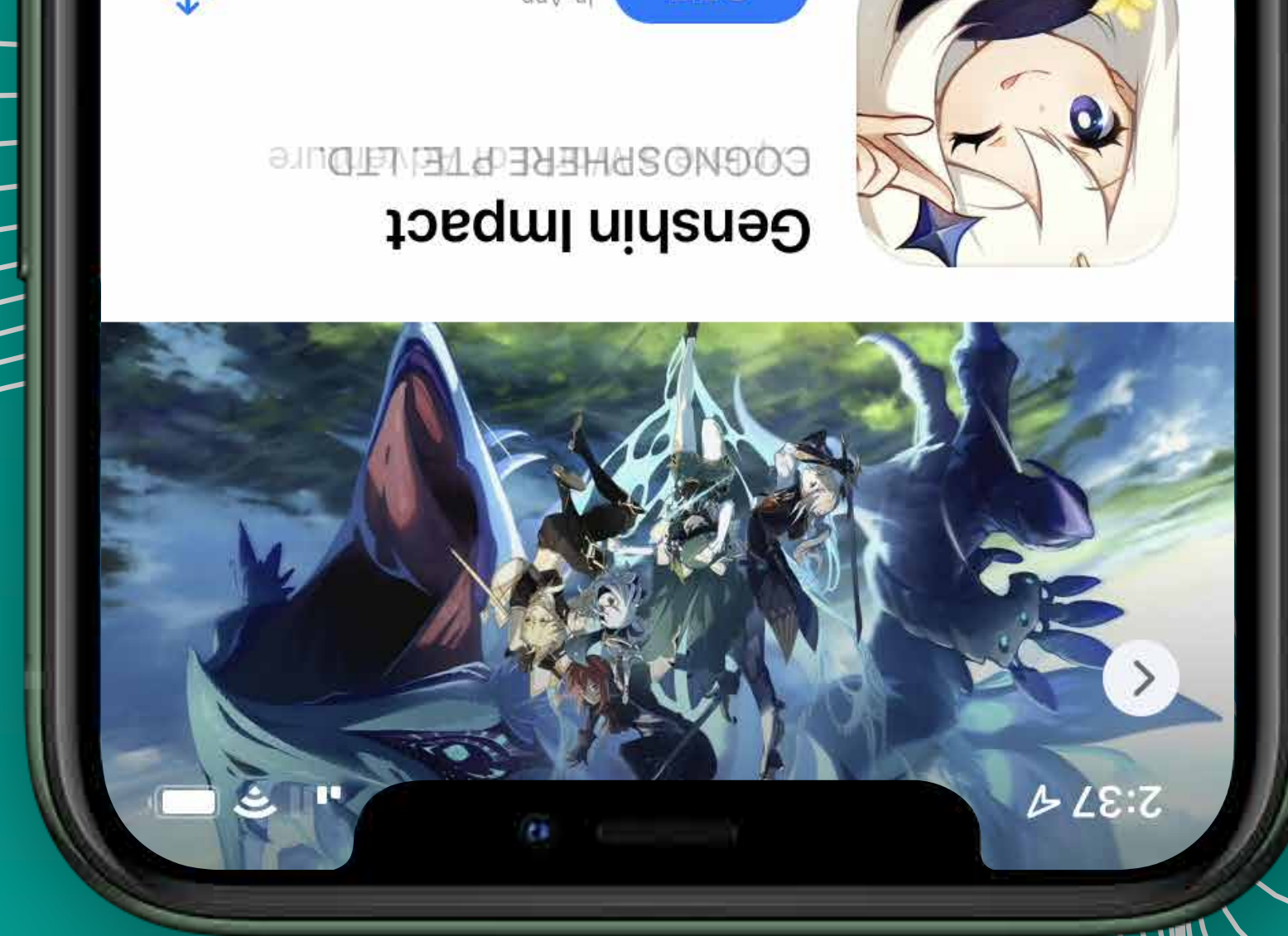


Table of Contents

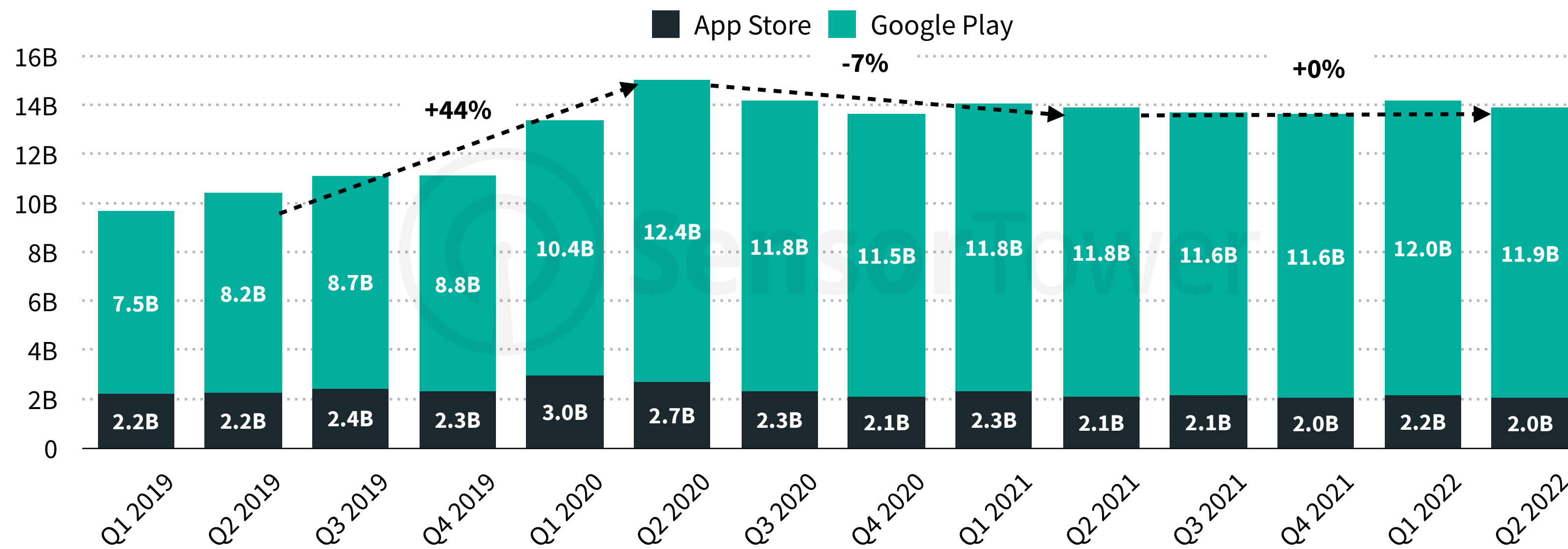
- 03 - Mobile Gaming Outlook
- 12 - Mobile Advertising Outlook
- 22 - Market Deep Dive: Card Battlers
- 31 - Market Deep Dive: MMORPGs
- 38 - Market Deep Dive: Real-Time Strategy
- 43 - Conclusion



Mobile Gaming **Outlook**

Mobile Game Adoption Remains Stable After a Jump in 2020

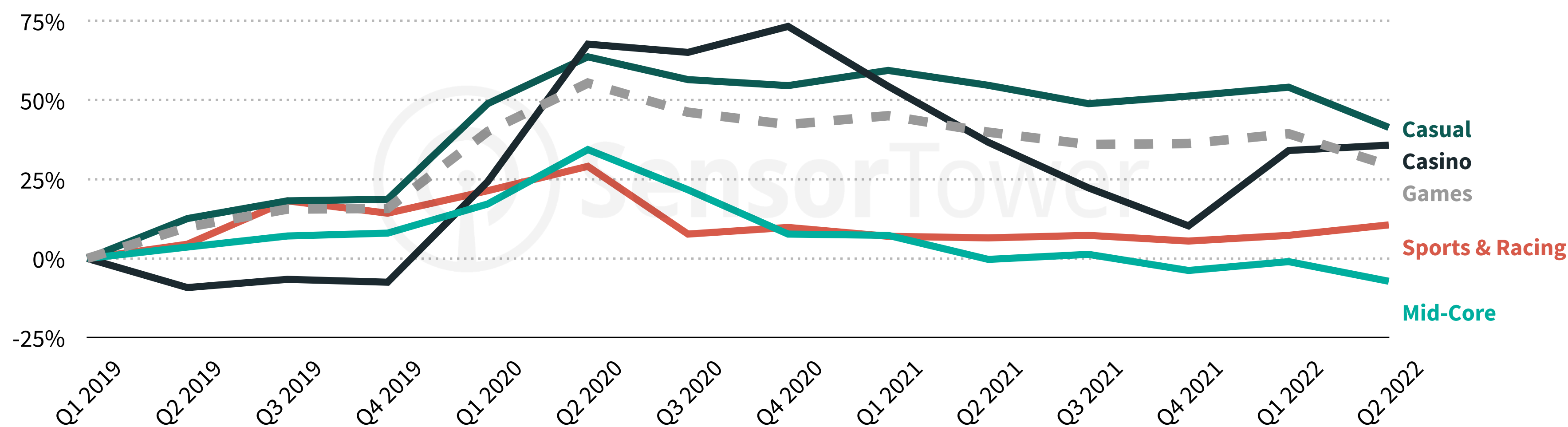
Worldwide quarterly downloads of mobile games on the App Store and Google Play



Mobile game downloads experienced big gains starting in Q1 2020 at the beginning of the pandemic. Between Q3 2019 and Q4 2020, global downloads registered double-digit growth and are currently stable at about the 14 billion mark.

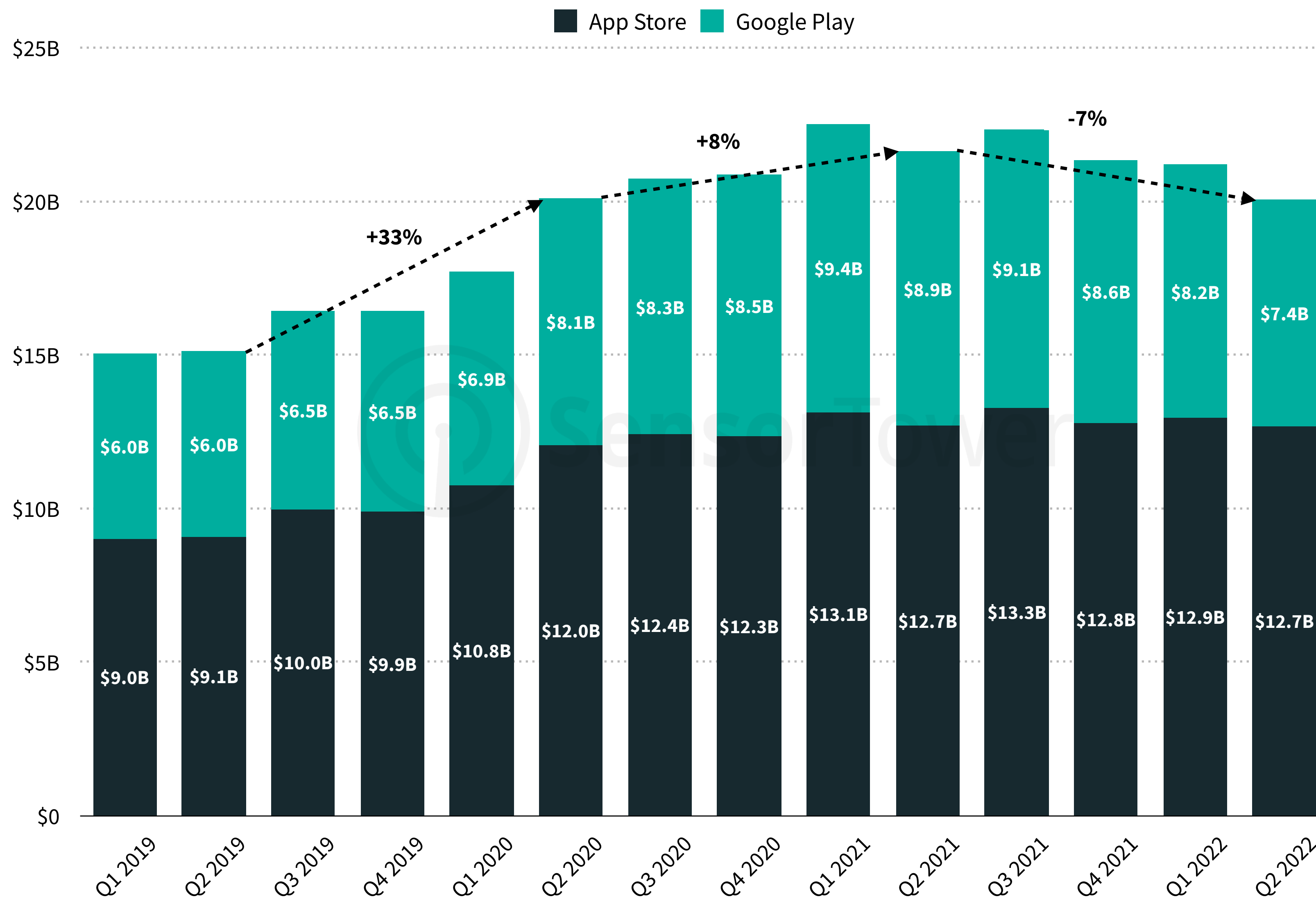
Although mobile game adoption has slowed since its peak in Q2 2020, it has remained well above pre-pandemic levels.

Quarterly worldwide genre download growth (indexed to Q1 2019)



Global Game Revenue Has Declined for the First Time

Worldwide quarterly consumer spending in mobile games on the App Store and Google Play

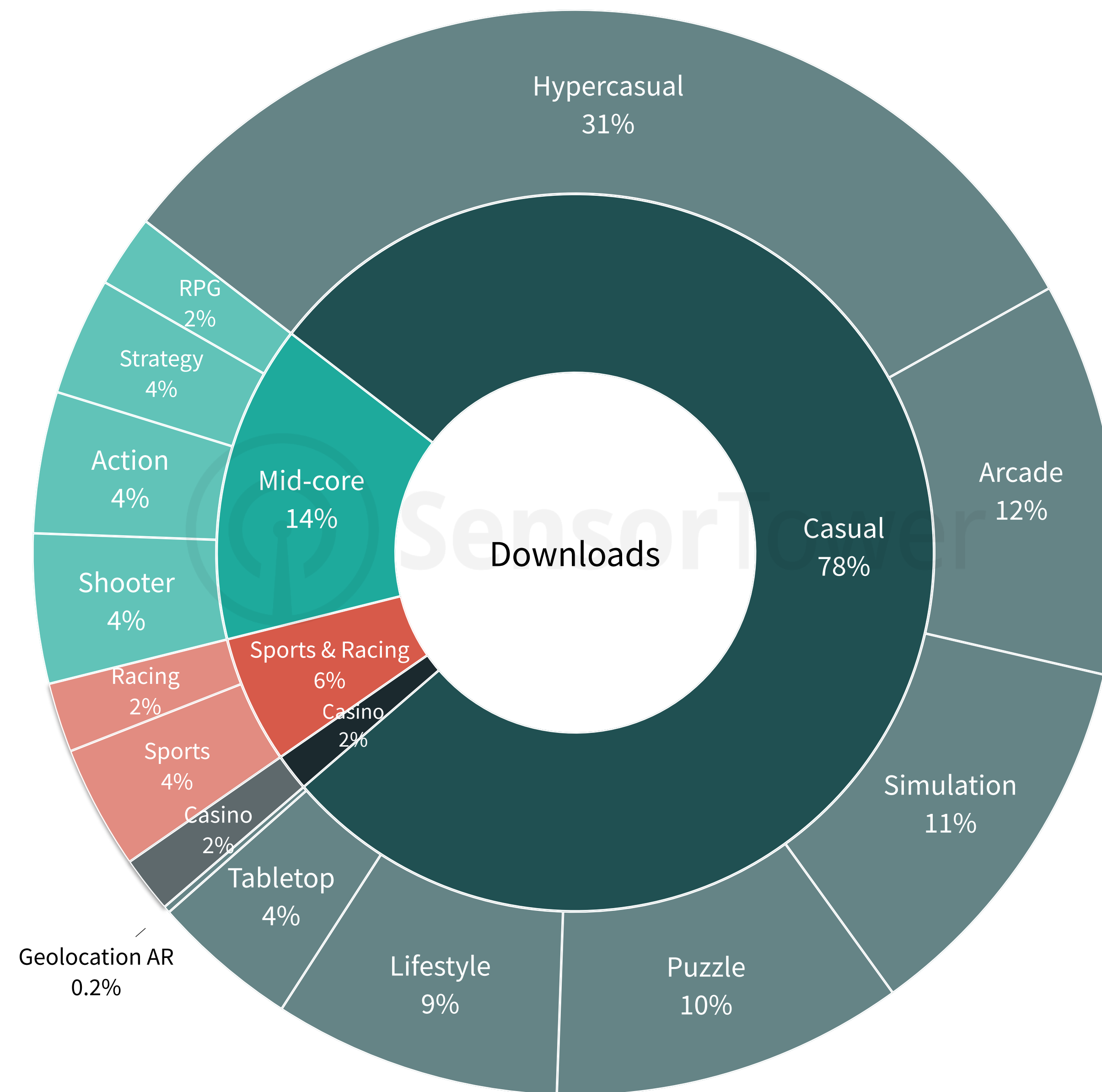


Global mobile game revenue surged during the start of the COVID-19 pandemic, seeing its largest year-over-year growth in Q2 2020 at 33 percent. Player spending peaked in Q1 2021 at \$22.6 billion.

Mobile game revenue declined Y/Y for the first time in history during Q1 2022. Player spending declined 6 percent Y/Y to \$21.2 billion, primarily due to the high base of comparison from the previous year. Spending was still up nearly 20 percent compared to Q1 2020.

Mid-Core Accounts for Only 14 Percent of Game Installs

Worldwide downloads by Game Class, Genre, and Sub-Genre in H1 2022

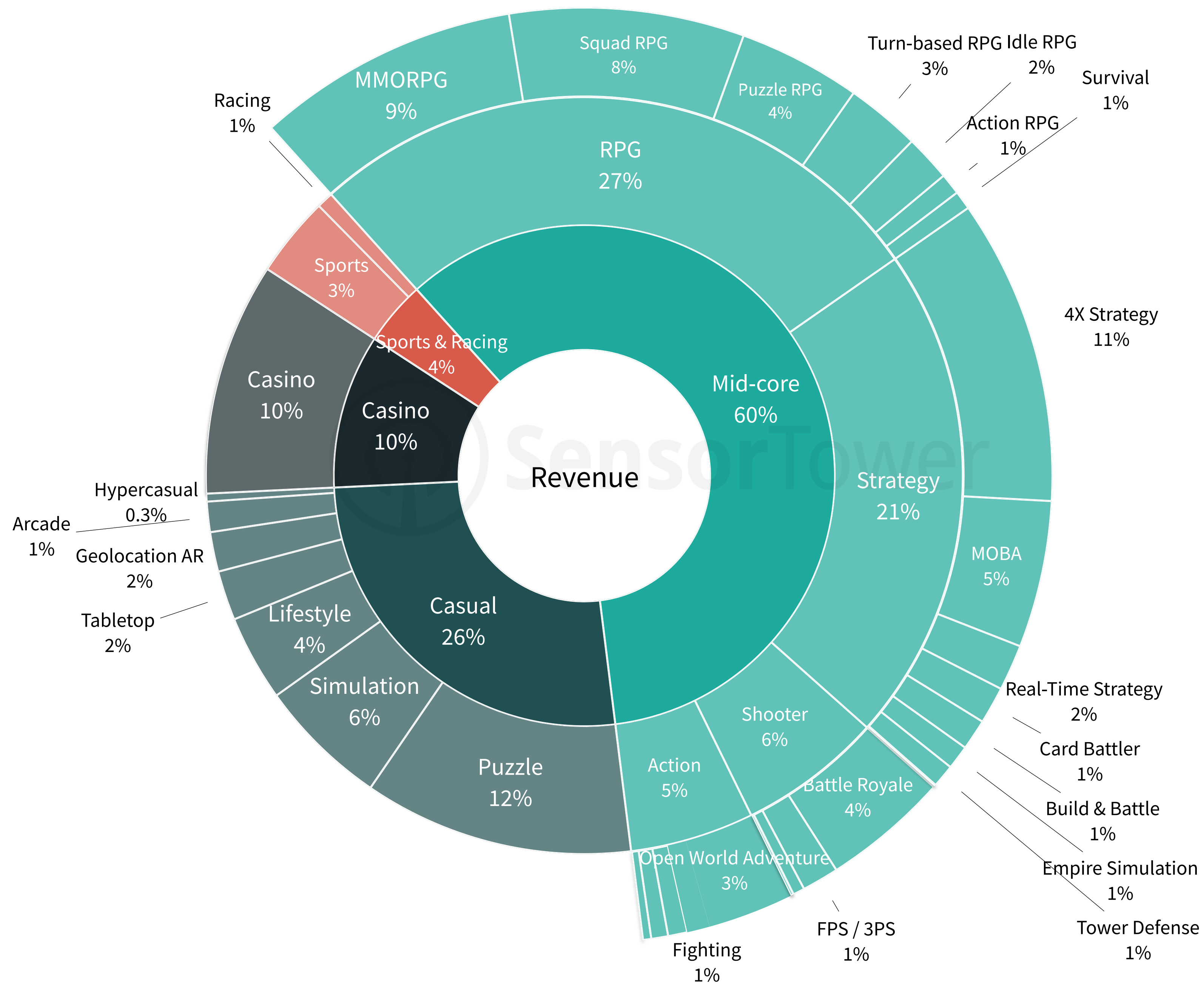


Even though more than half of player spending is concentrated in the Mid-Core class, the vast majority of downloads are from Casual games. Including Hypercasual, this class accounts for 80 percent of downloads. **Mid-Core games account for just 14 percent of worldwide installs.**

The Shooter genre ranks as the most popular among Mid-Core games. Action is the second largest by downloads, accounting for 29 percent of Mid-Core installs in H1 2022.

The Majority of Mobile Game Spending Is in Mid-Core Games

Worldwide revenue by Game Class, Genre, and Sub-Genre in H1 2022



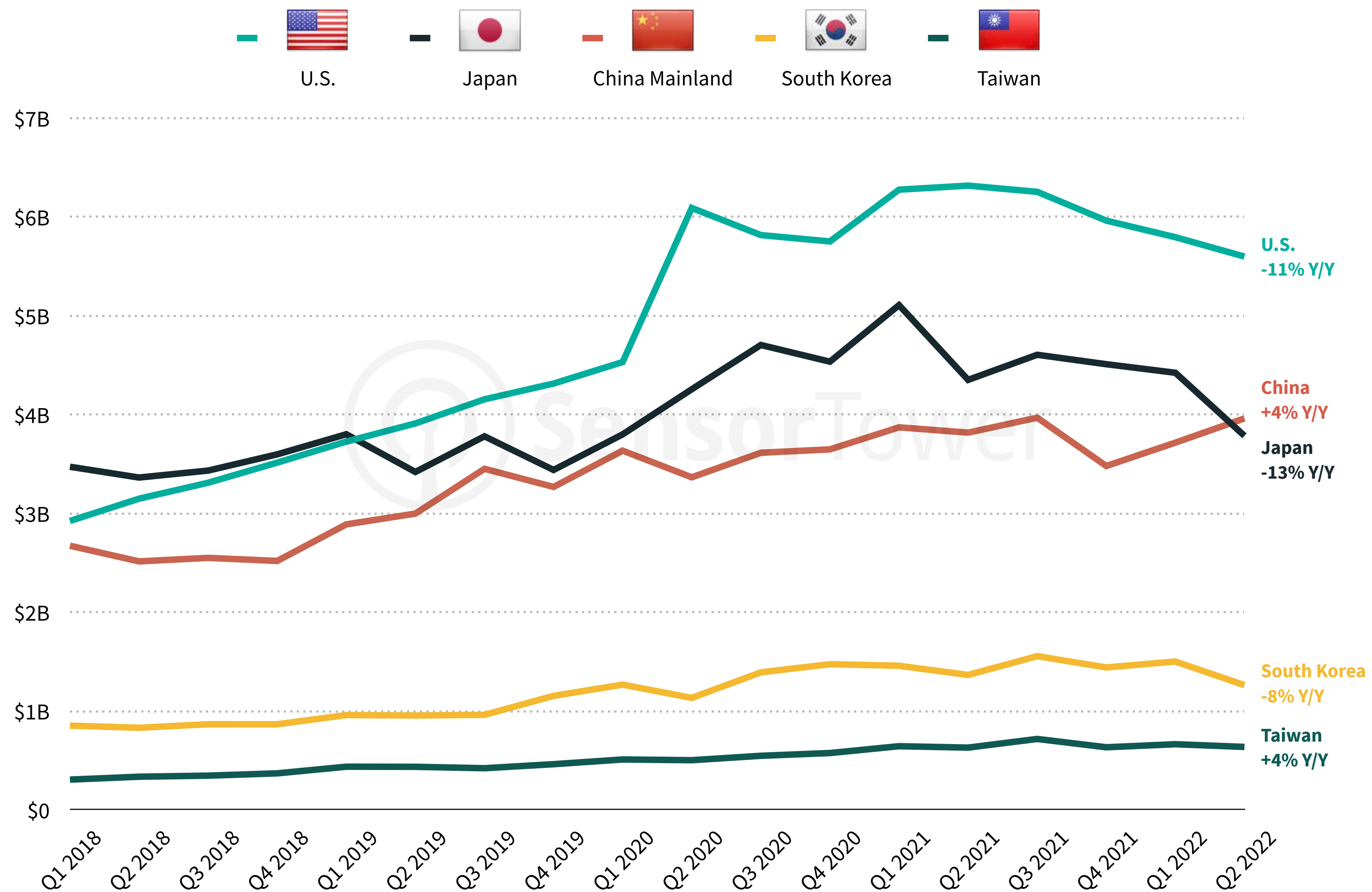
The Mid-Core class is a collection of genres that appeal to a more dedicated gaming audience. They typically require a significant time investment by players, have complex mechanics, and monetize through in-app purchases. **Mid-Core accounts for 60 percent of worldwide player spending.**

RPG ranks as the No. 1 genre by player spending, accounting for almost half of the Mid-Core market.

Strategy ranks as the No. 2 genre by player spending, accounting for 36 percent of the Mid-Core market.

The United States Is Still the Top Market by Consumer Spend

Top markets by mobile game spending, App Store and Google Play



The United States remains the top market for mobile games, having outpaced Japan in Q2 2019, and surpassed \$6 billion in revenue during Q1 2021.

U.S. player spending stayed above \$6 billion each quarter in 2021, but declined 11 percent year-over-year during Q2 2022.

Japan, the second largest mobile games market, saw revenue down Y/Y for the fourth consecutive quarter in Q2 2022.

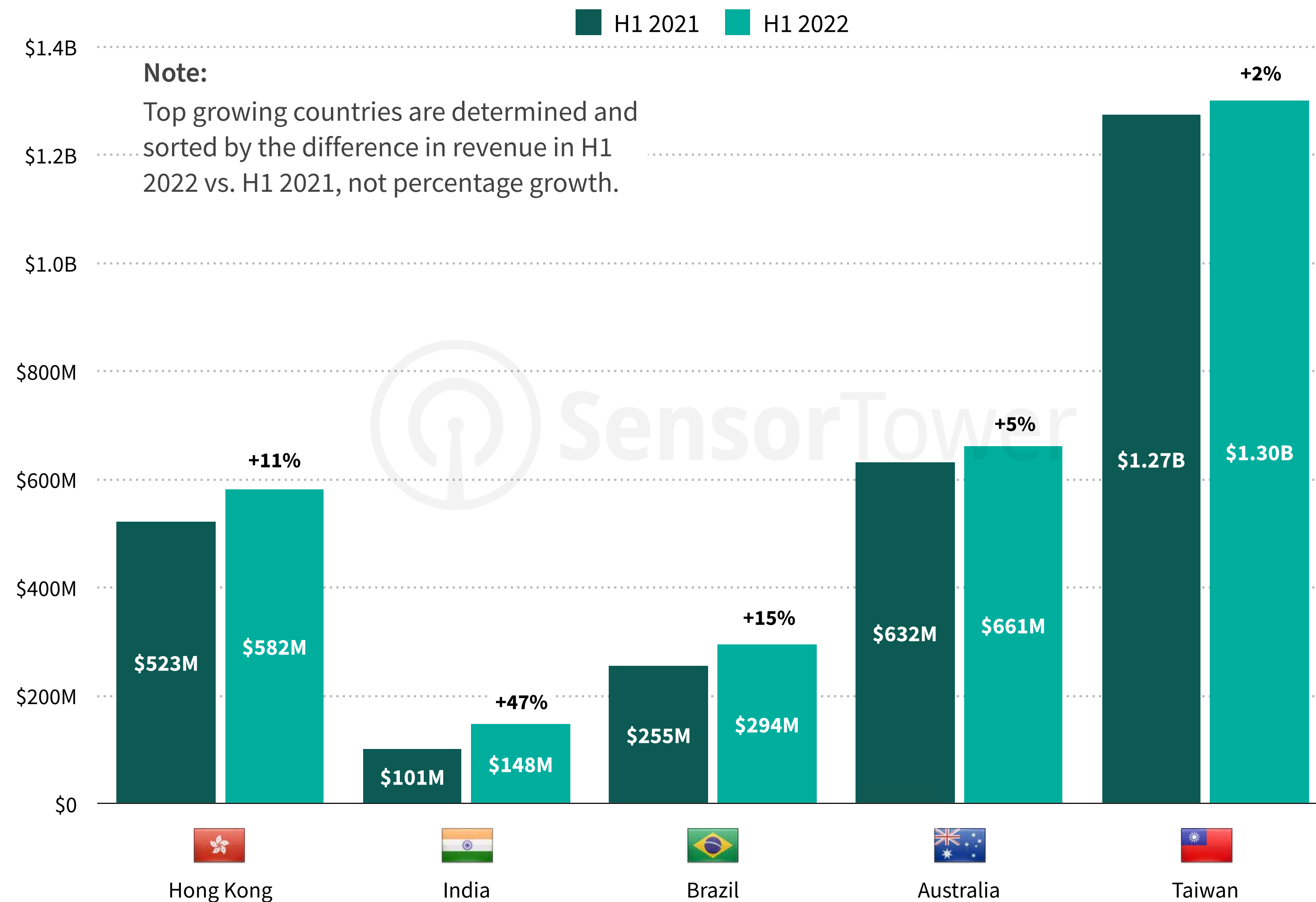
Taiwan, the fifth largest market, is still growing. Revenue increased during Q2 2022 to nearly \$650 million, up 4 percent Y/Y.

Note:

China numbers only include the App Store as Google Play is not available there.

Taiwan Has Displaced Germany as the Fifth Largest Market

Top markets by Y/Y mobile game spending growth in H1 2022, App Store and Google Play

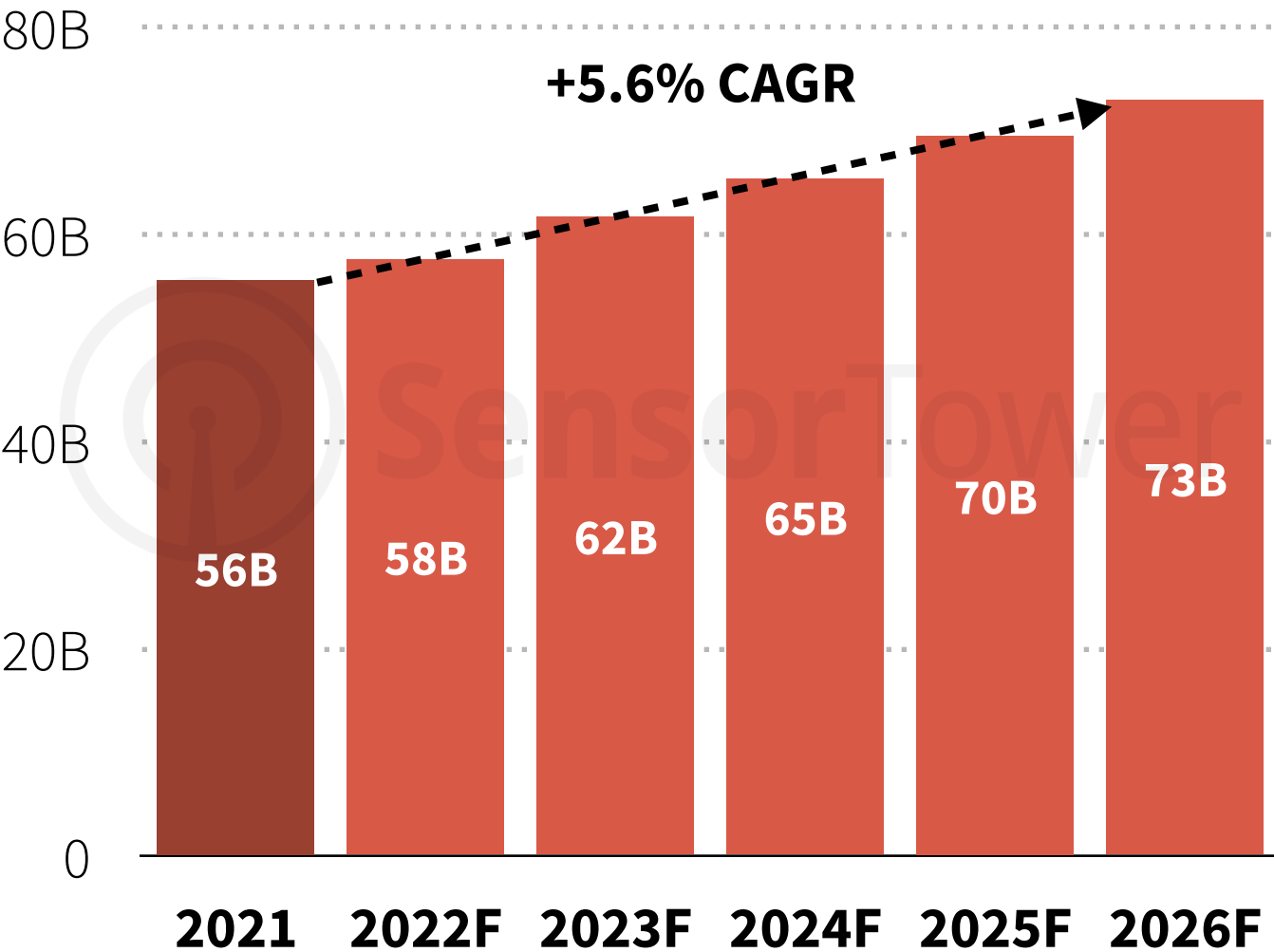


Having experienced double-digit growth between Q2 2018 and Q4 2021, Taiwan displaced Germany as the fifth largest mobile games market in the world. Consumer spending in this country reached \$1.3 billion in H1 2022.

Four of the five top markets by player spending growth are in APAC, exposing how relevant the APAC region is for the games industry. Brazil was the only exception with 15 percent Y/Y growth.

Market Overview: Global Mobile Game Download Forecast

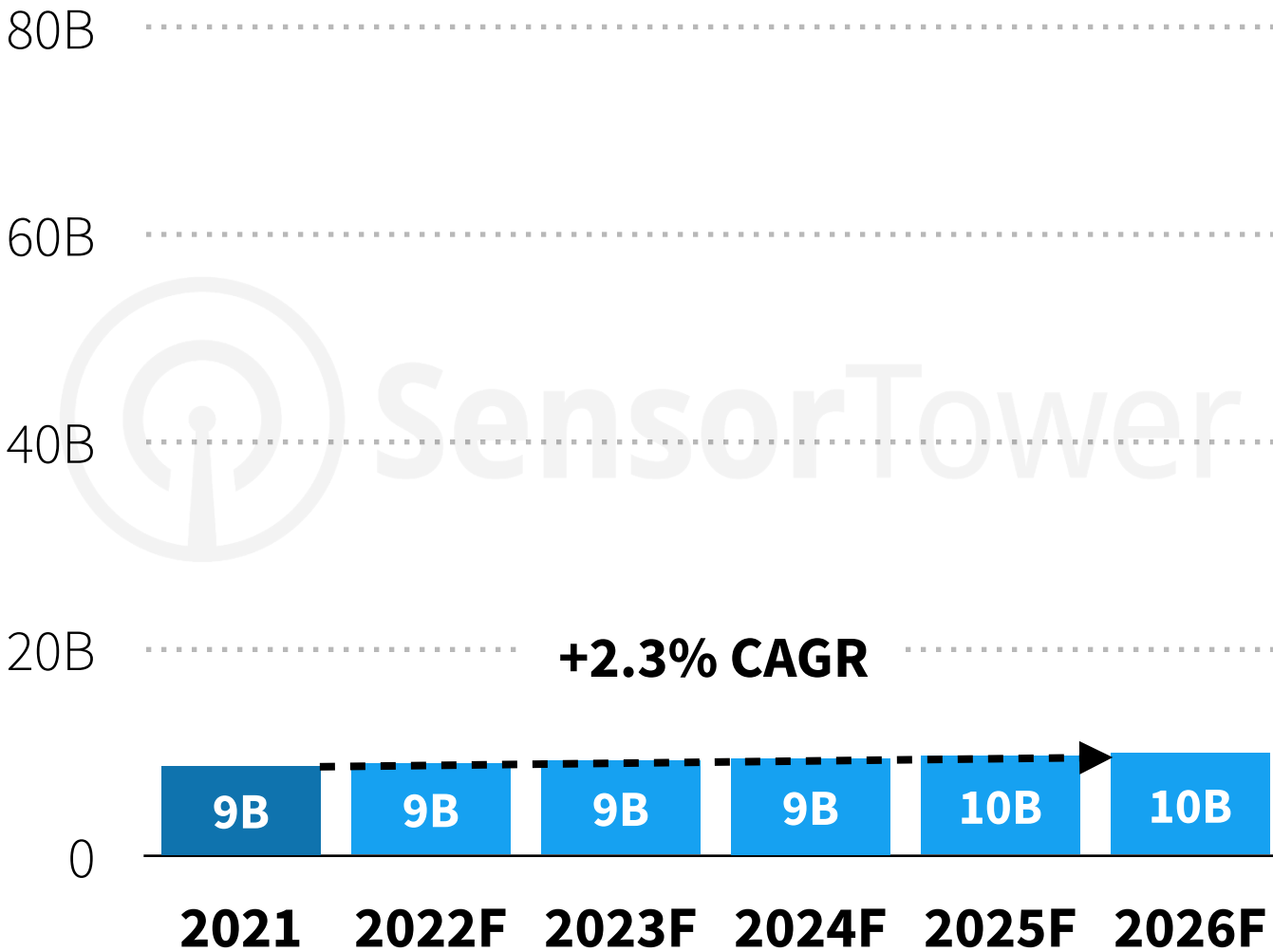
Worldwide App Store and Google Play Downloads



73 Billion

App Store + Google Play Downloads
By 2026

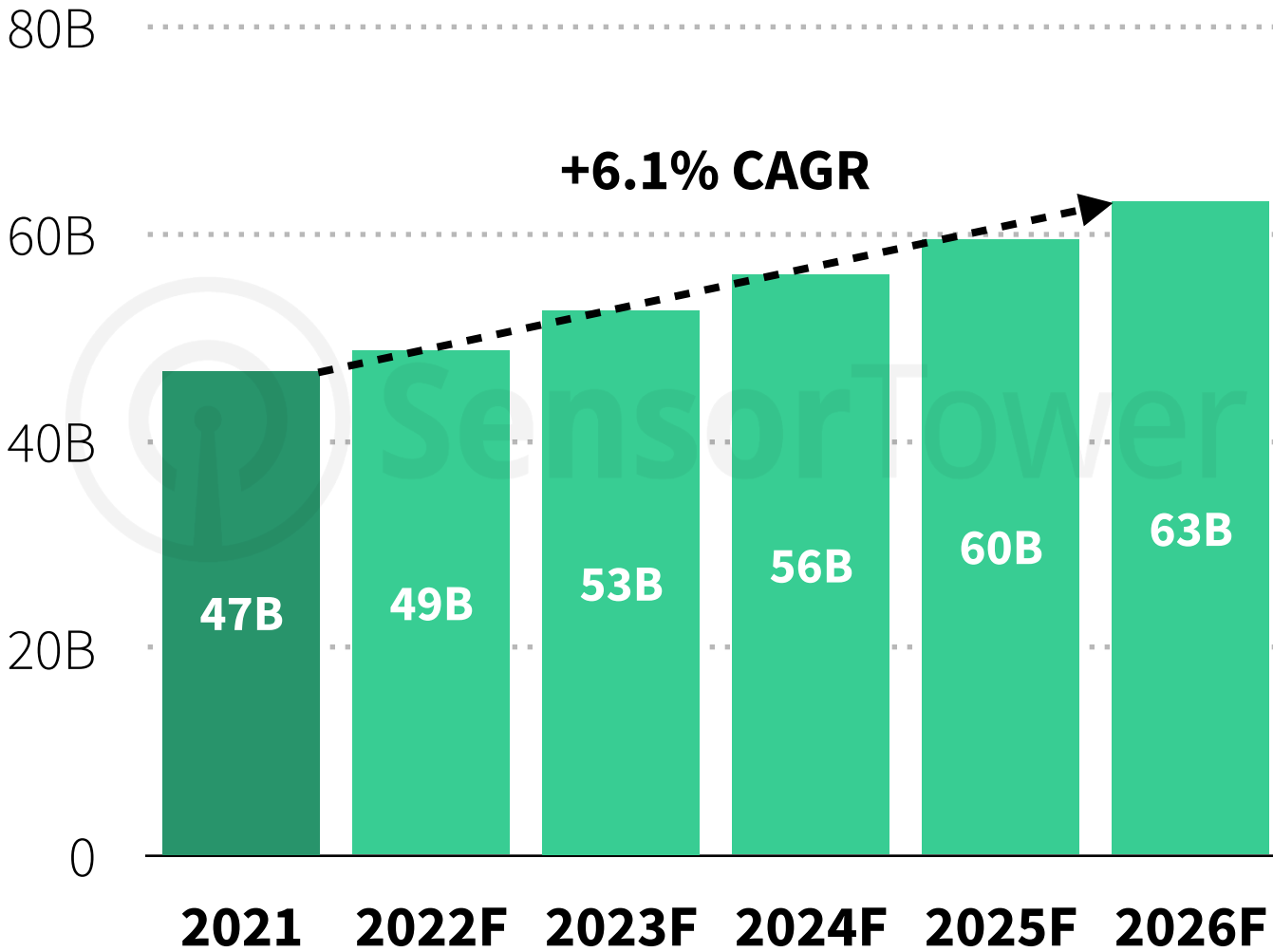
Worldwide App Store Downloads



10 Billion

App Store Downloads
By 2026

Worldwide Google Play Downloads



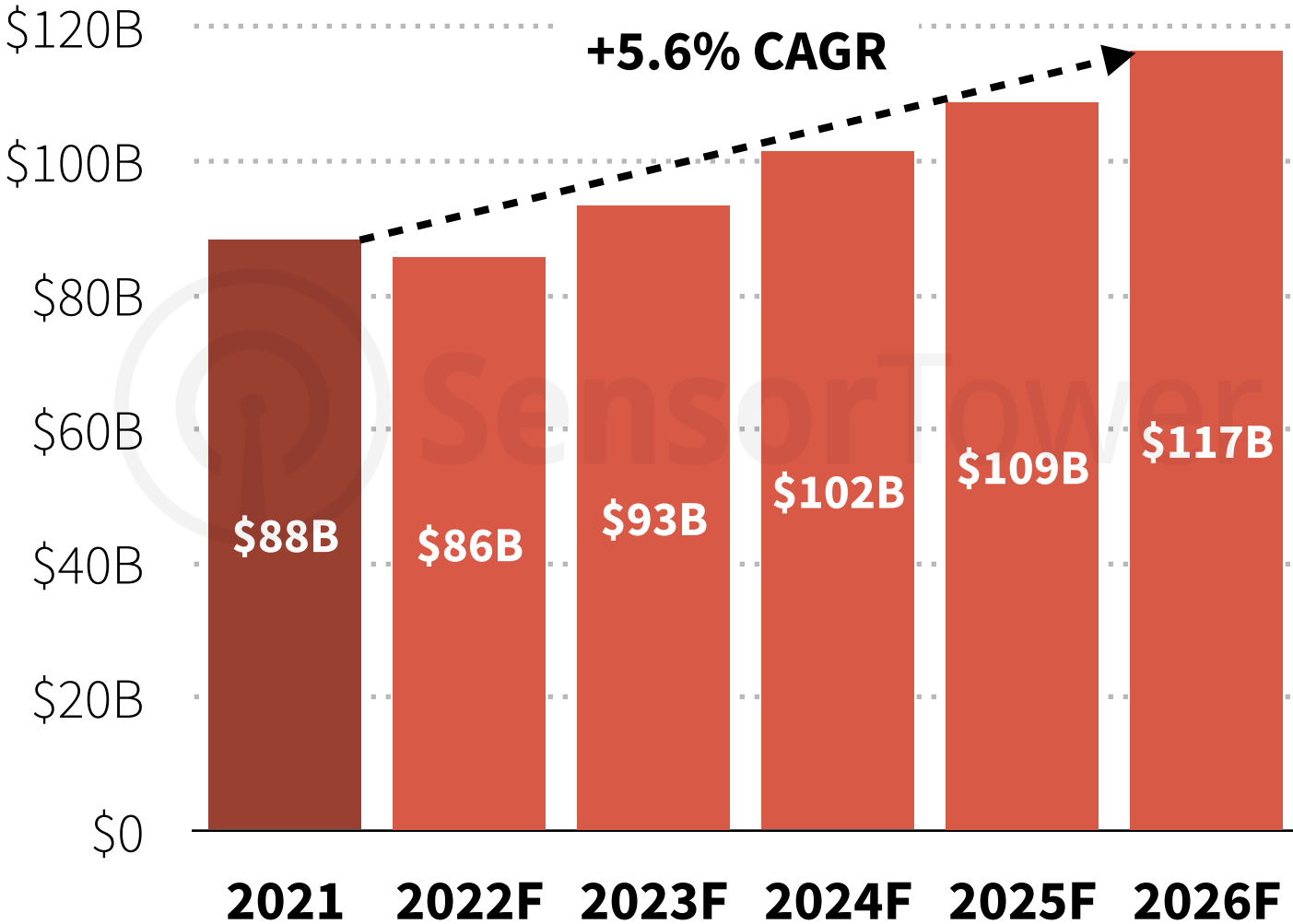
63 Billion

Google Play Downloads
By 2026

Market Overview: Global Mobile Game Spending Forecast

Note Regarding Revenue Estimates
 We report gross revenue (including the cut for Apple or Google).
 Android estimates do not include third-party stores.

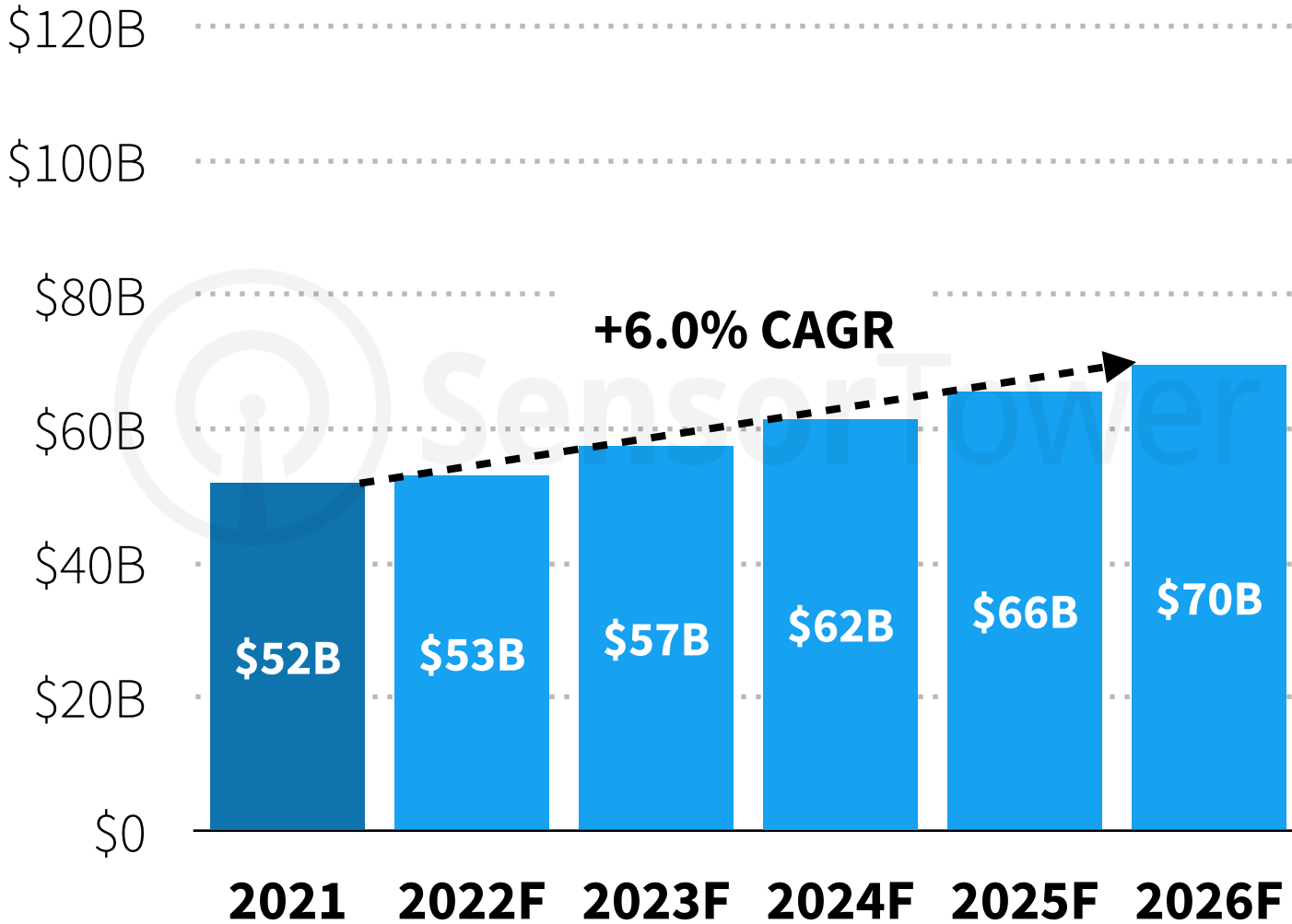
Worldwide App Store and Google Play User Spending



\$117 Billion

App Store + Google Play Revenue
By 2026

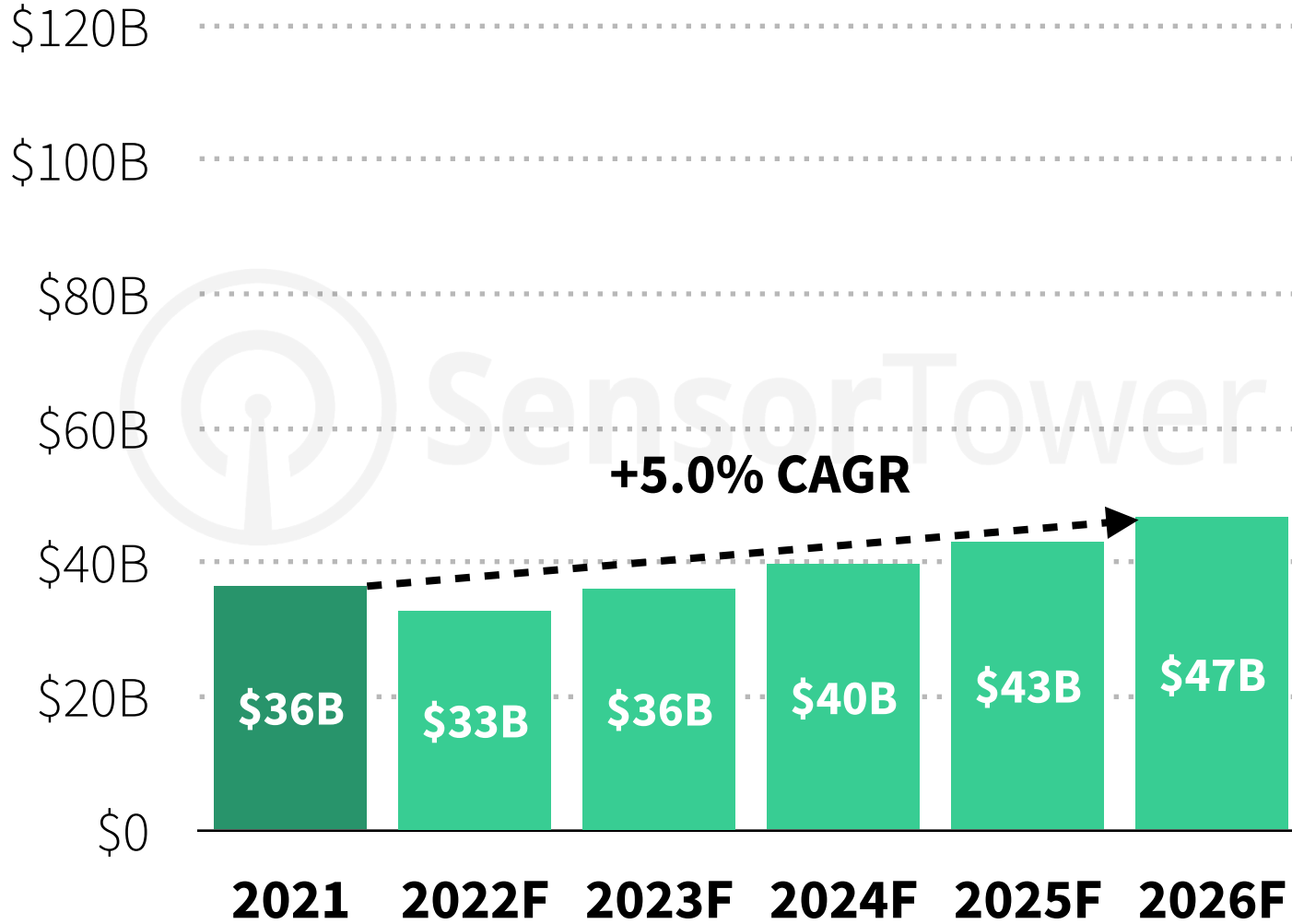
Worldwide App Store User Spending



\$70 Billion

App Store Revenue
By 2026

Worldwide Google Play User Spending



\$47 Billion

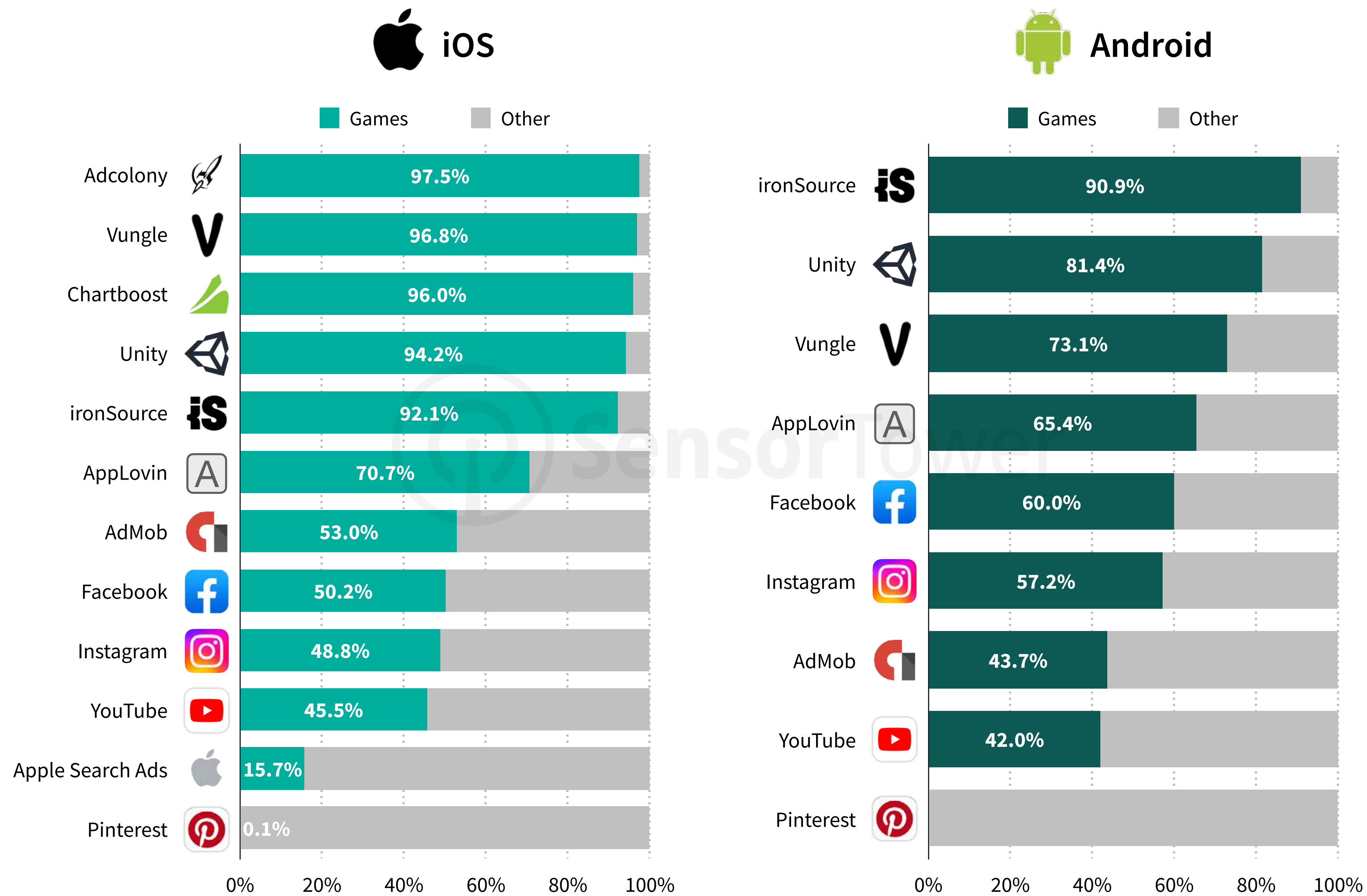
Google Play Revenue
By 2026



Mobile Advertising **Outlook**

Five Ad Networks Lead the Way by Game Share of Voice

U.S. share of voice for mobile games vs. non-game apps by ad network, year-to-date



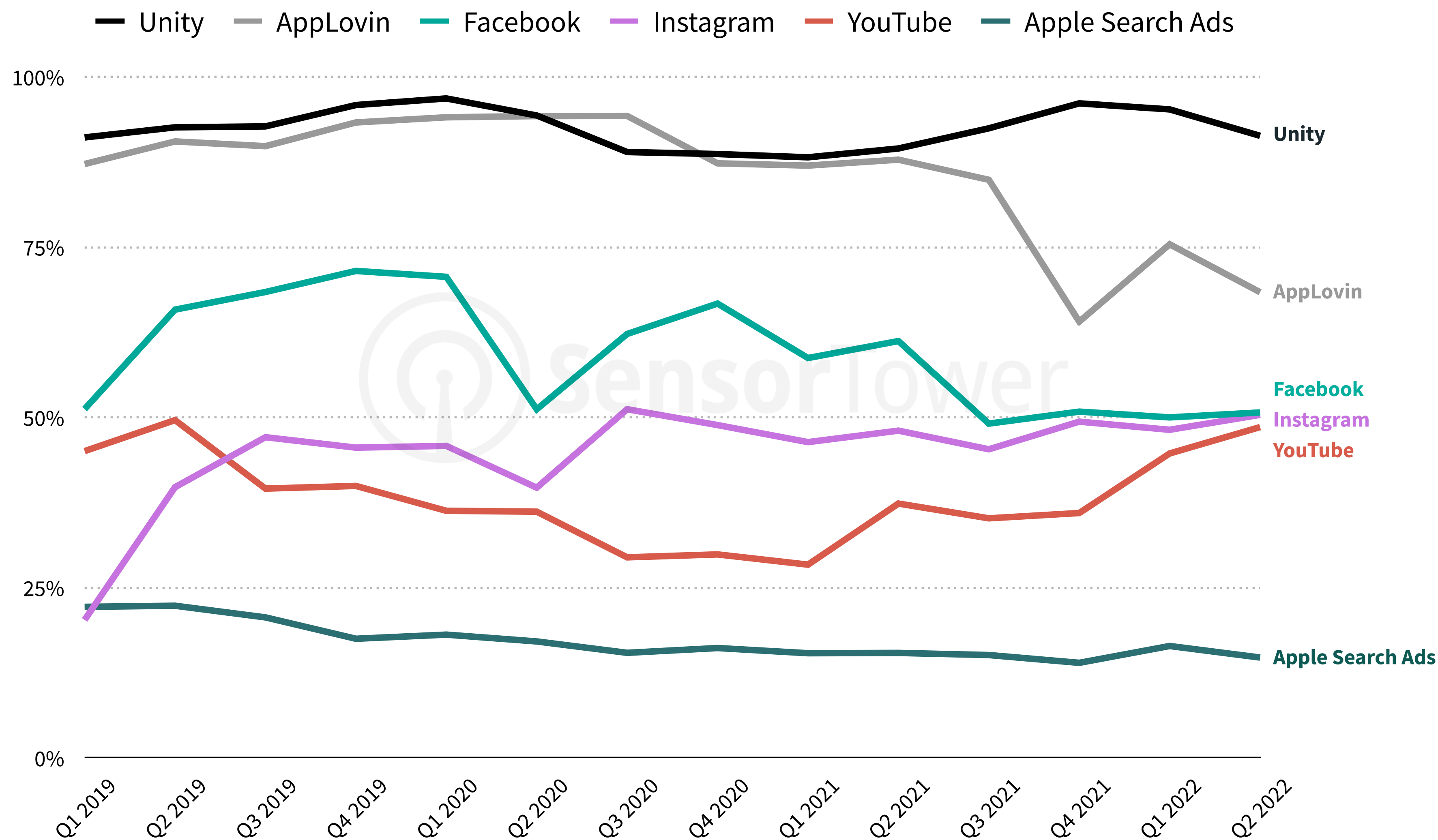
On iOS, Five ad networks were primarily focused on mobile games and had at least 90 percent of their share of voice (SOV) come from games.

Another four networks had a more even split between gaming and non-gaming. AdMob, Facebook, Instagram, and YouTube had between 40 and 60 percent SOV from games.

After the IDFA deprecation there was considerable speculation about Apple Search Ads. According to SensorTower's share of voice, the network does not seem to be a great fit for games.

Game SOV Has Converged on Social Ad Networks

Quarterly U.S. iOS share of voice from mobile games by ad network, Q1 2019 to Q2 2022



More than 90 percent of the impressions on Unity's Ad Network are from games. Popular gaming-focused networks like Adcolony, Vungle, and ironSource also consistently saw more than 85 percent SOV from games.

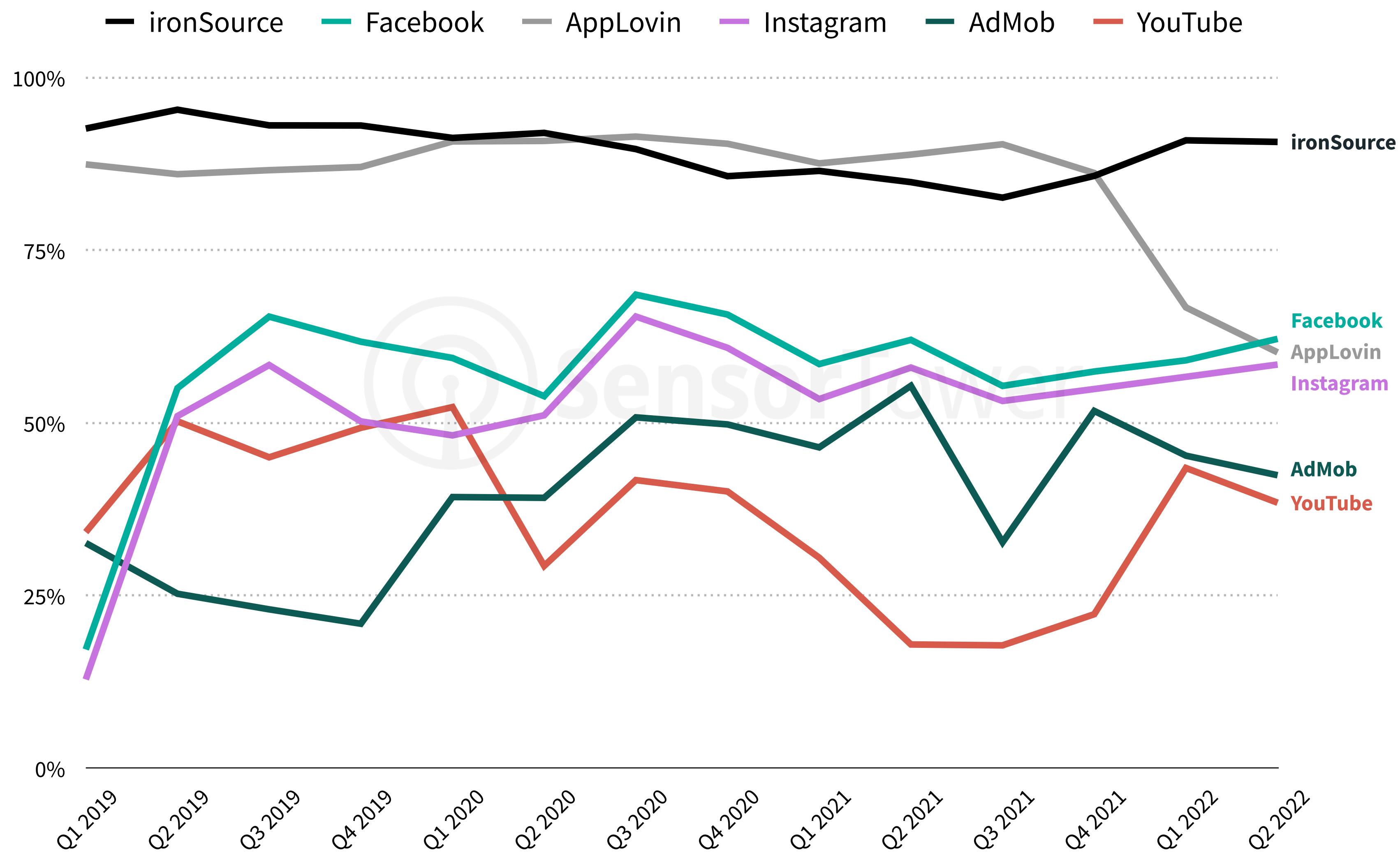
AppLovin transitioned towards being much more focused on game advertisements at the start of 2019. This corresponded with its investment in mobile game developers such as PeopleFun, in addition to its own game publishing wing, Lion Studios. **AppLovin's SOV from games decreased around the time that it acquired MoPub.**

YouTube has seen SOV from games gradually decline in recent years before an uptick in starting in 2021.

Games Take Majority SOV on Facebook and Instagram

Quarterly U.S. Android share of voice from mobile games by ad network, Q1 2019 to Q2 2022

Android



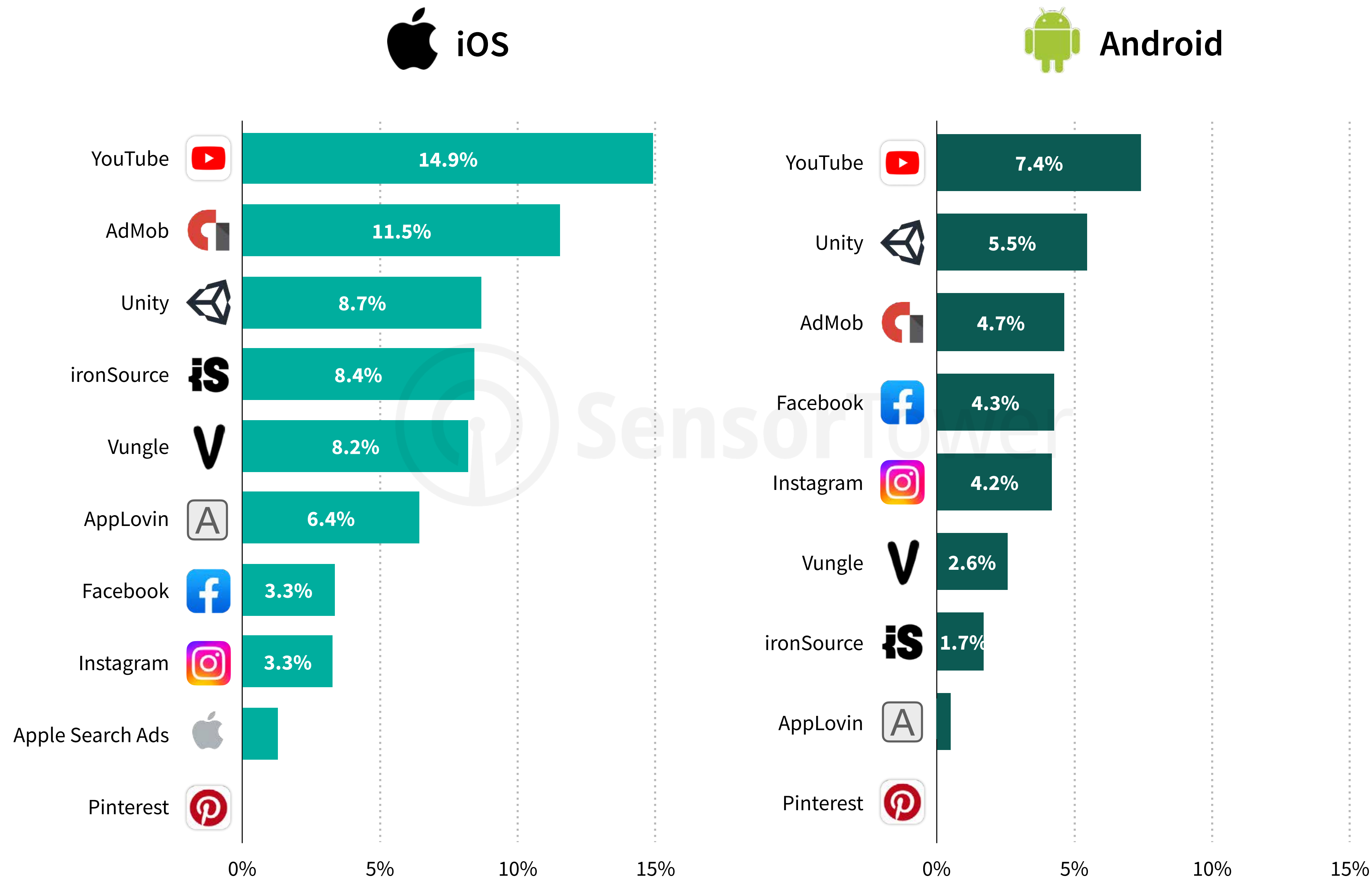
Similar to what's seen on iOS, AppLovin's share of voice from Google Play games has decreased in recent quarters.

Share of Voice from mobile games increased to more than 35 percent on YouTube in the first two quarters of 2022.

Mobile game ad trends on Facebook and Instagram mirrored each other over the past two years, with games focusing a little more on Facebook than Instagram.

Strategy Game Advertisers Trust YouTube

U.S. share of voice for Strategy games by ad network, year-to-date



While mobile games account for less than 50 percent of overall app SOV on YouTube, Strategy games had nearly 15 percent of YouTube’s SOV on iOS. **Strategy games were responsible for nearly a third of all game SOV on the network.**

AdMob and Unity were some other top ad networks for Strategy games in H1 2022.

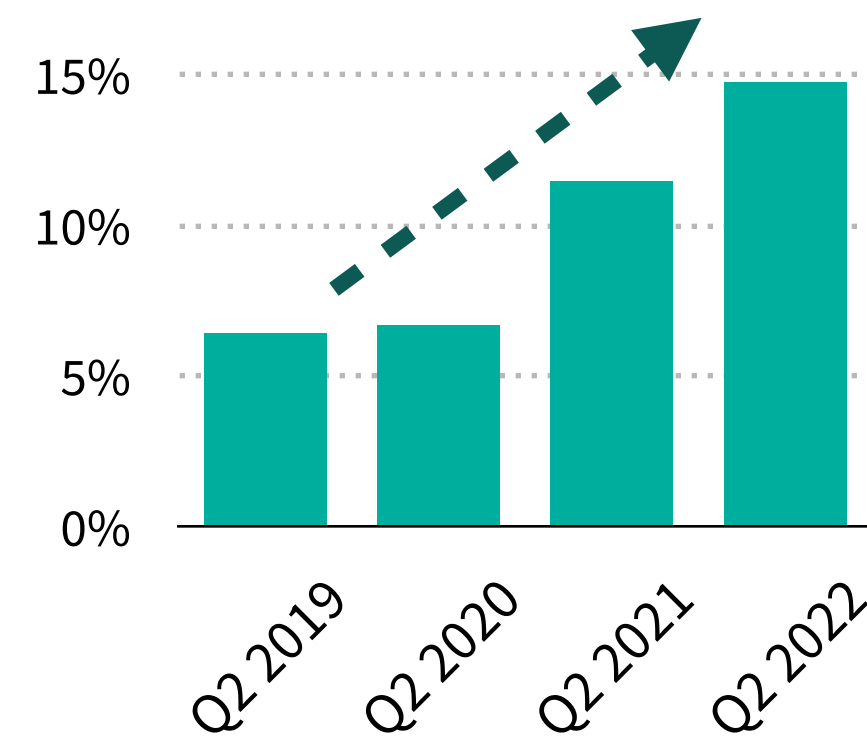
Note:
Strategy games are classified using Sensor Tower’s Game Taxonomy

Strategy Game Ads on ironSource and AppLovin are on the Rise

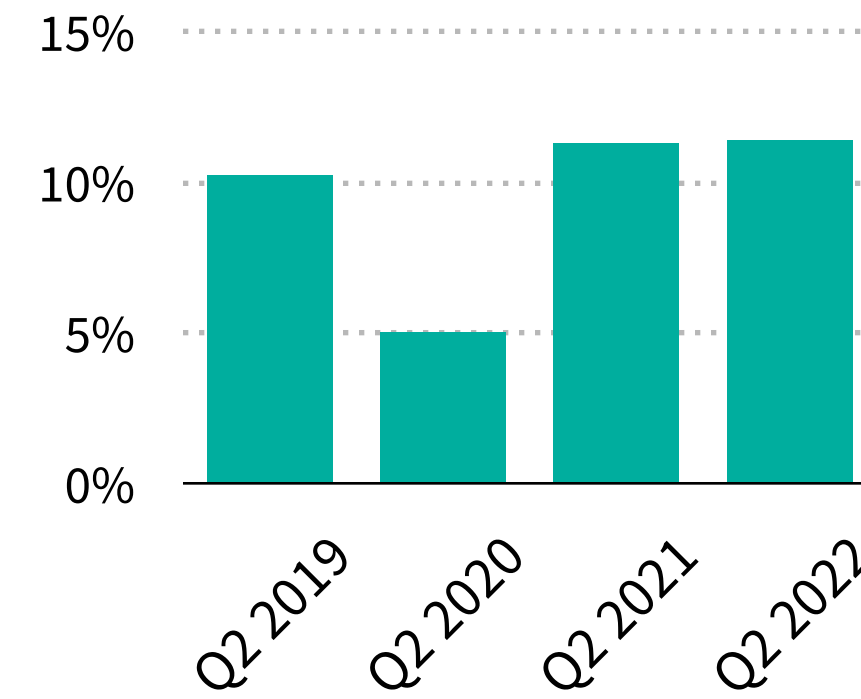
U.S. iOS share of voice for Strategy games by ad network, Q2 2019 to Q2 2022



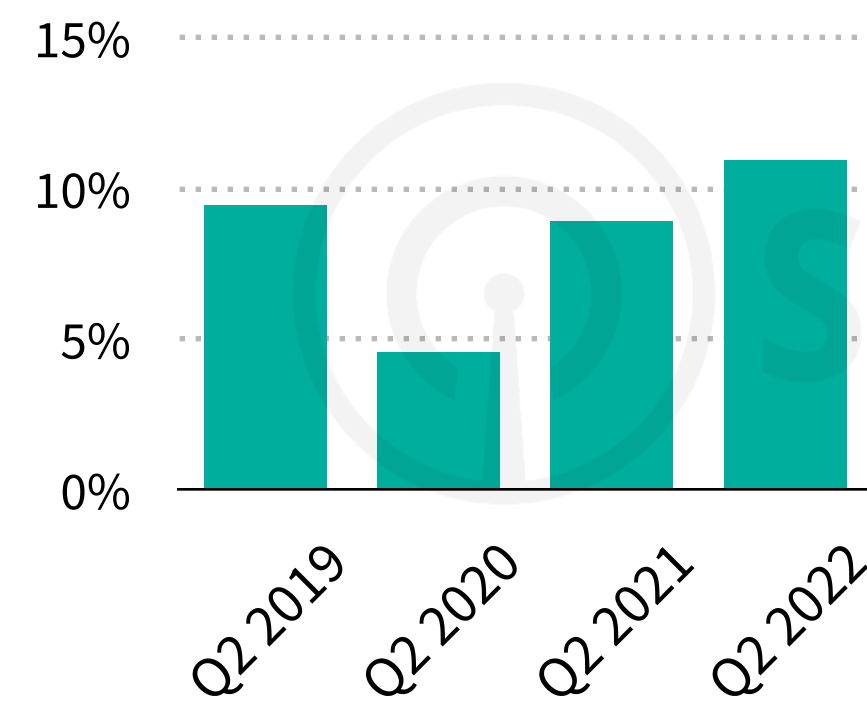
YouTube



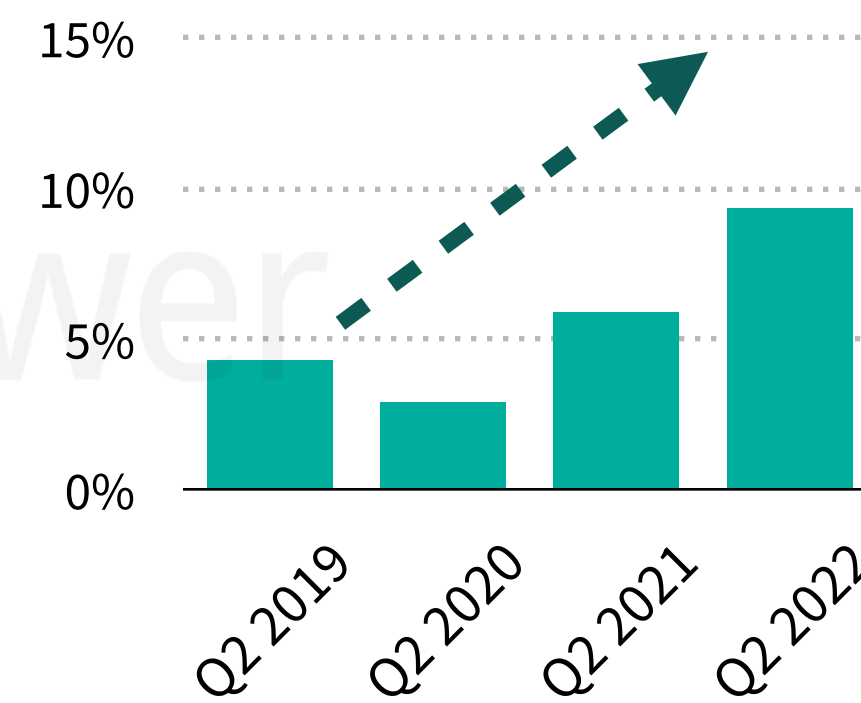
AdMob



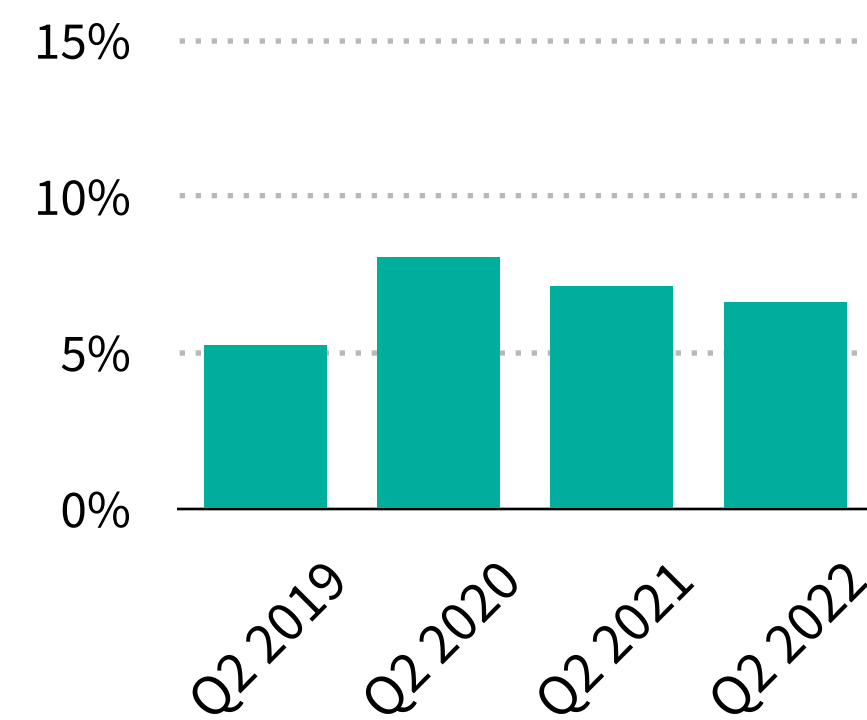
Unity



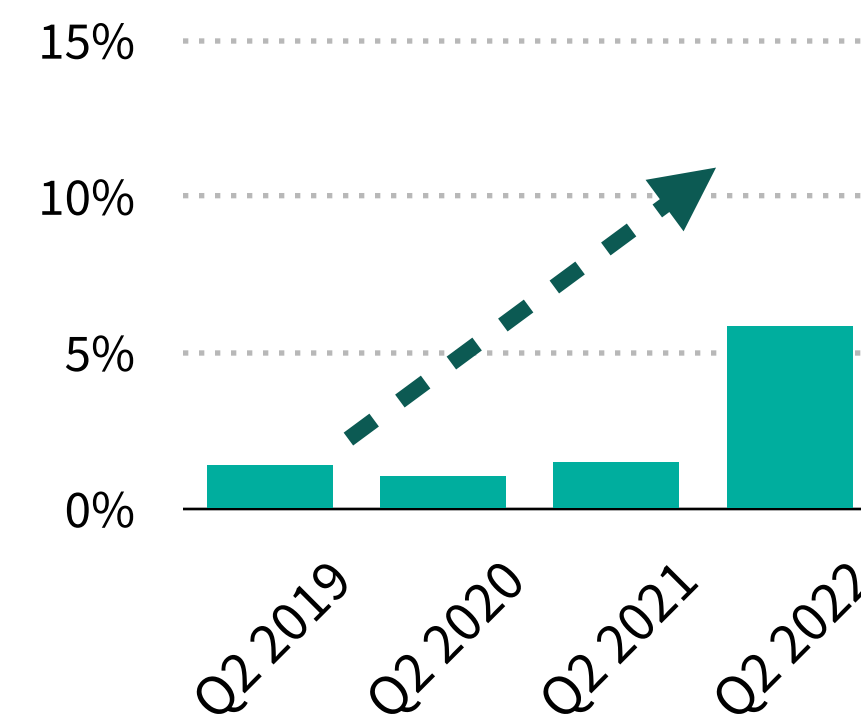
ironSource



Vungle



AppLovin



Strategy games have increased their Share of Voice on YouTube and ironSource over the past few years, while holding fairly steady on AdMob.

AppLovin had historically focused on casual game advertising, though its acquisition of MoPub helped it diversify its offering.

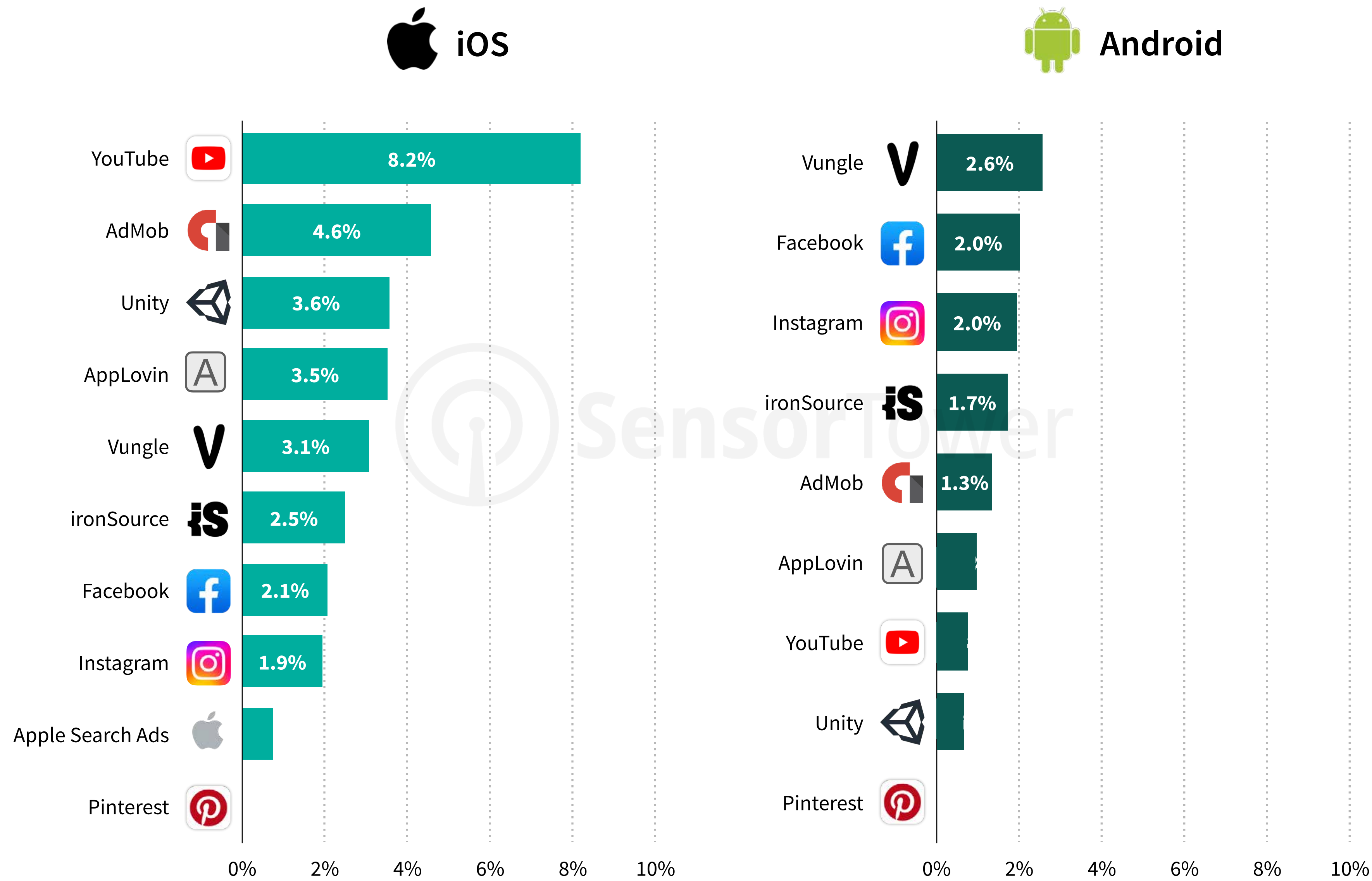
AppLovin has seen a spike in Strategy advertising following its acquisition of MoPub in early 2022.

Note:

Strategy games are classified using Sensor Tower's Game Taxonomy

RPG Share of Voice Is Higher on iOS Across Networks

U.S. share of voice for RPGs by ad network, year-to-date



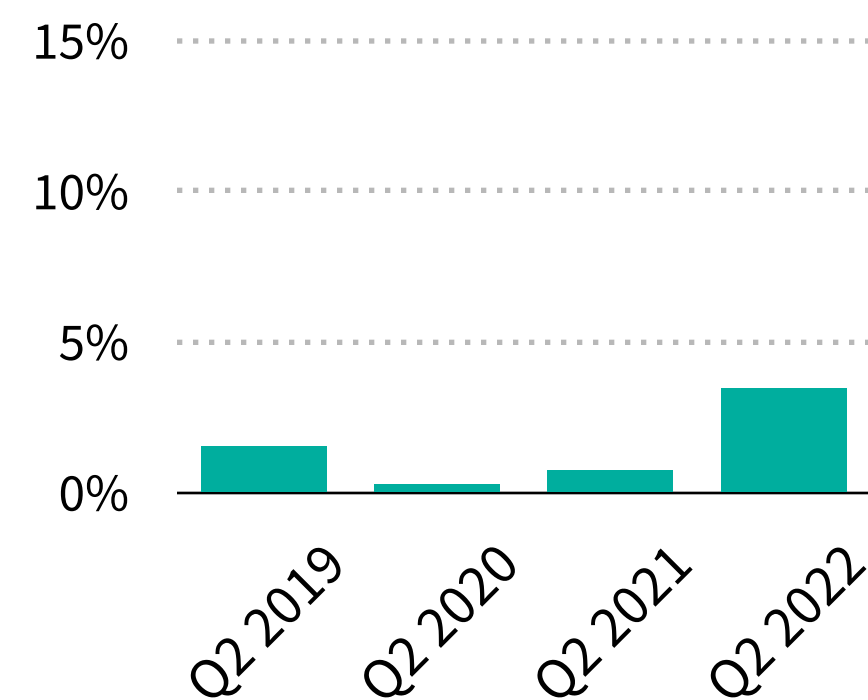
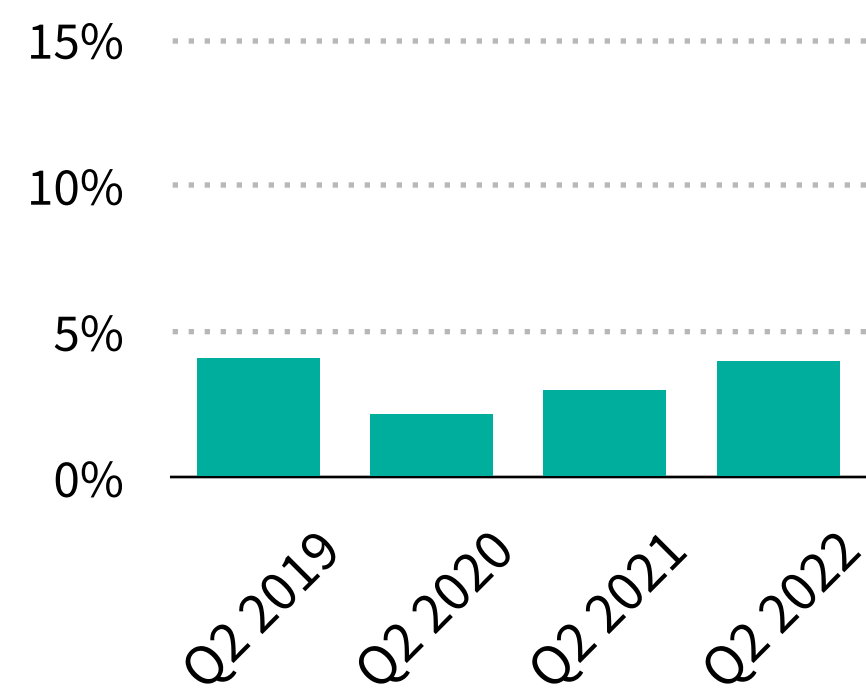
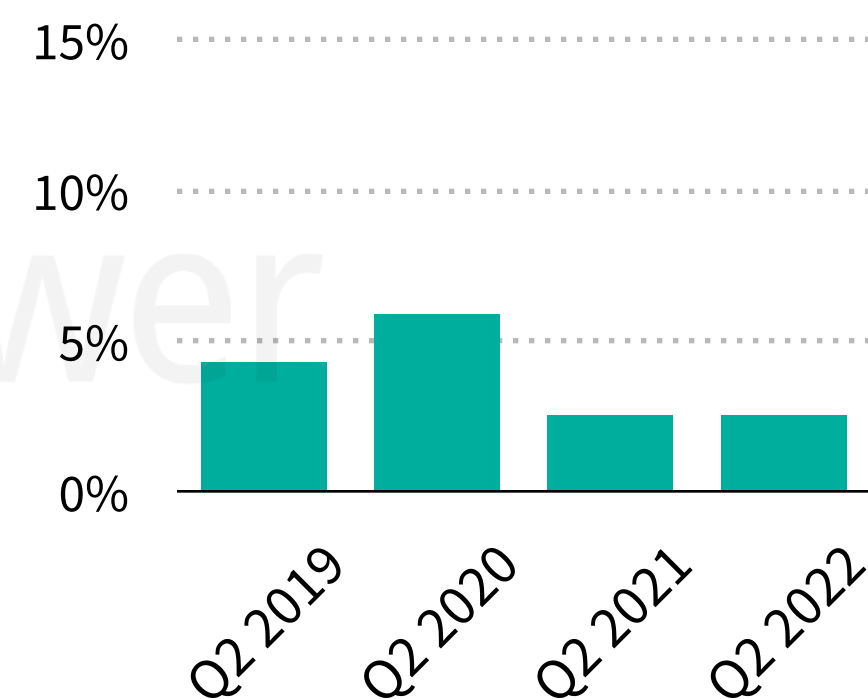
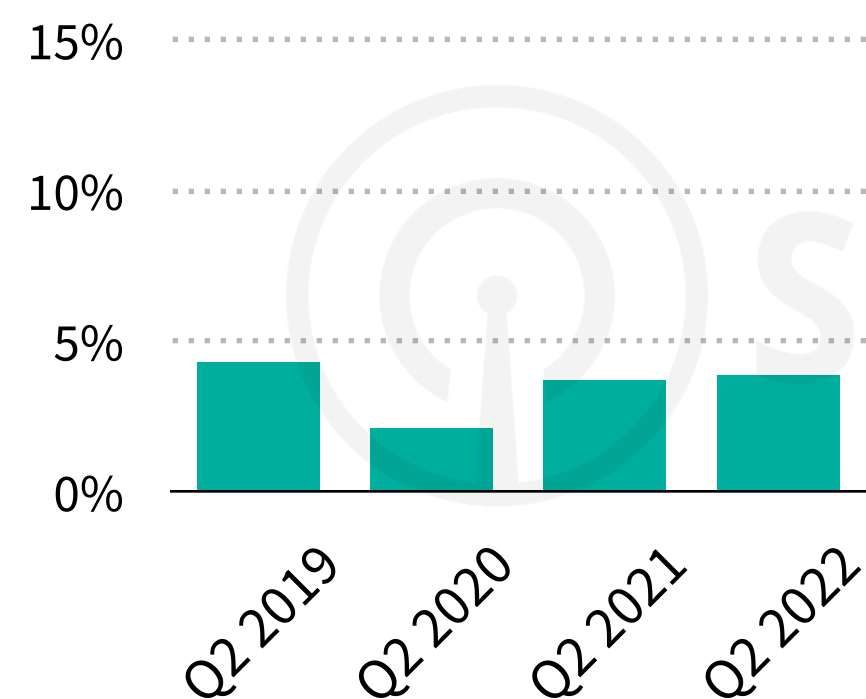
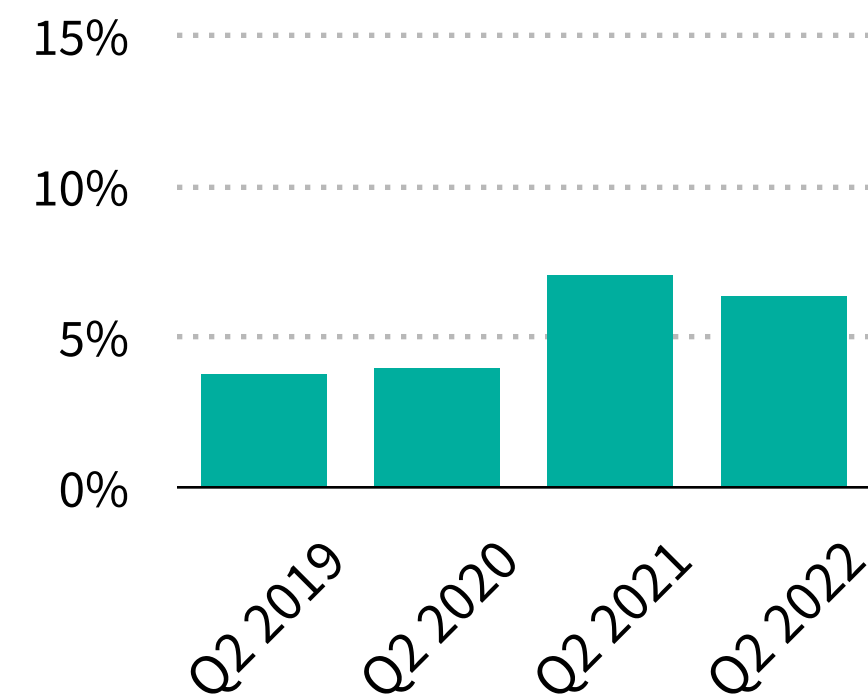
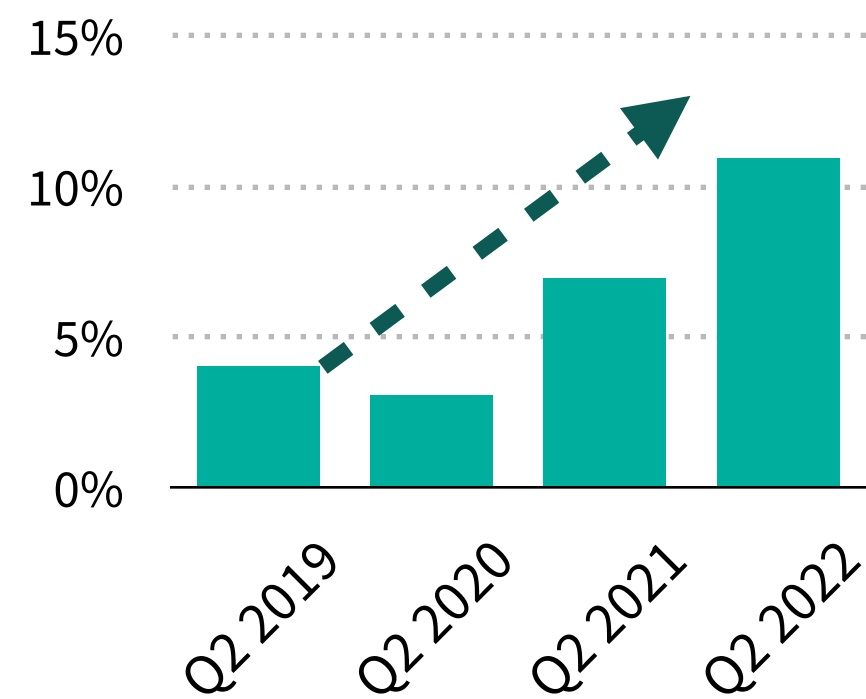
RPG titles in the U.S. had a similar approach to advertising as Strategy games, though RPG tended to have lower Share of Voice across the board. YouTube was the top network by RPG Share of Voice at 8.2 percent.

RPGs had lower Share of Voice on Android than on iOS across nearly all networks, with Instagram as the only exception.

Note:
RPG titles are classified using Sensor Tower's Game Taxonomy

RPG Share of Voice on YouTube Surpassed 10 Percent in Q2 2022

U.S. iOS share of voice for RPGs by ad network, Q2 2019 to Q2 2022



Similar to Strategy games, RPGs have also increased their Share of Voice on YouTube each of the past two years. RPG SOV surpassed 10 percent in Q2 2022.

AdMob was the only other network with at least 5 percent SOV from RPGs in Q2 2022.

Note:
RPG titles are classified using Sensor Tower's Game Taxonomy

MU Origin 3 Focused on Social Networks

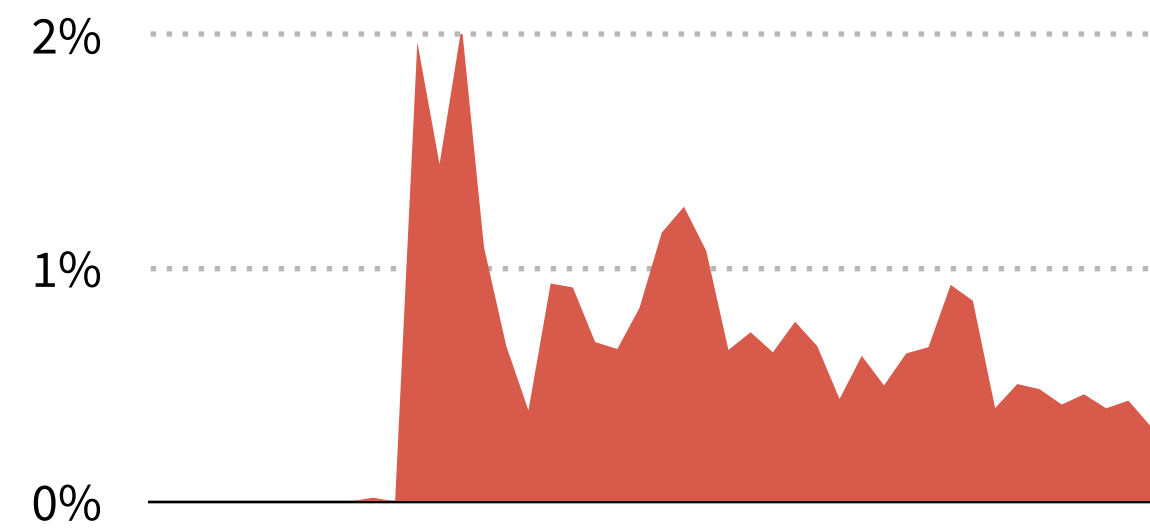
MU Origin 3 U.S iOS Share of Voice



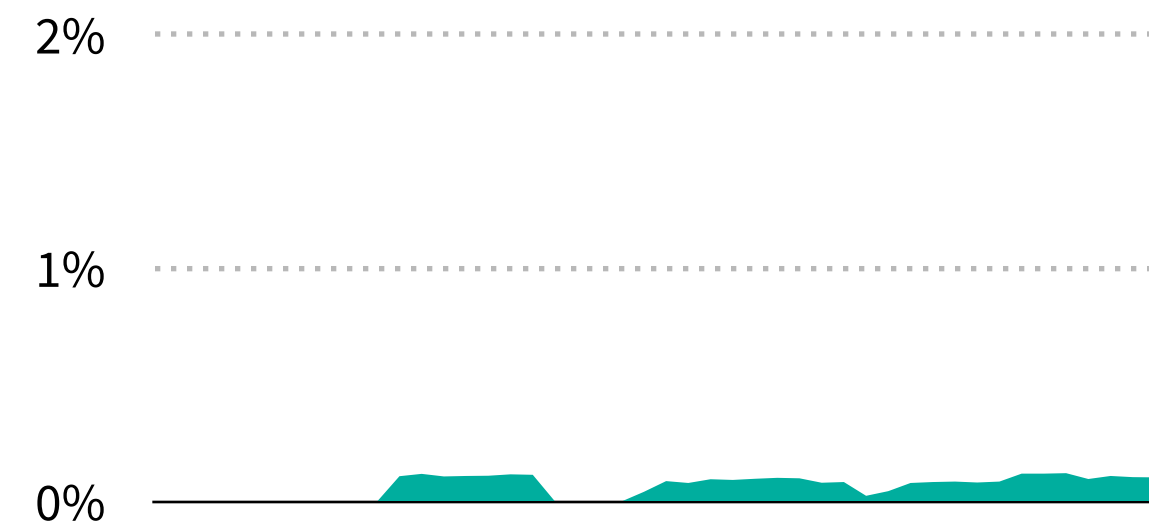
MU Origin 3
OurPalm



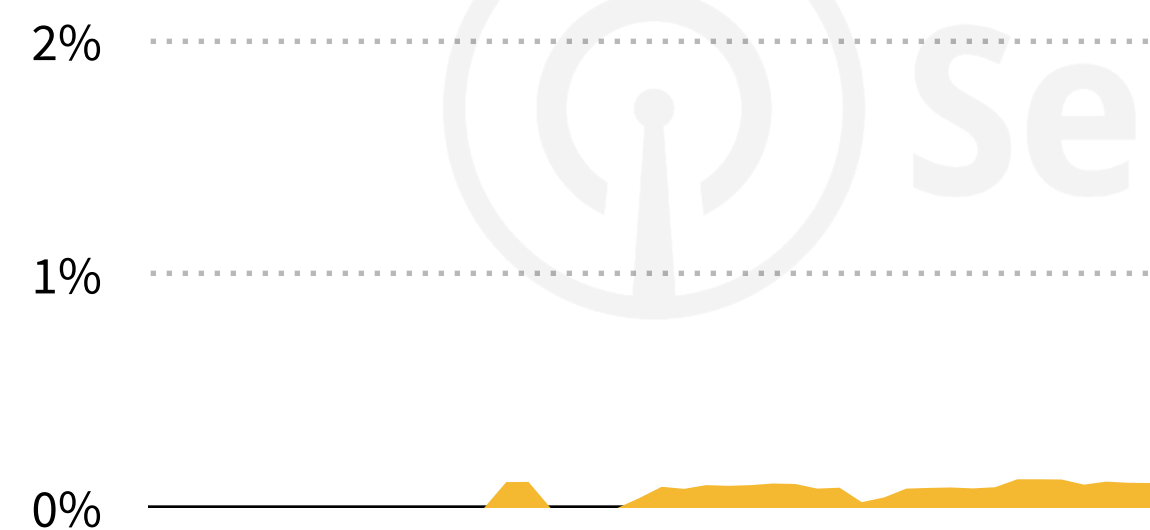
YouTube



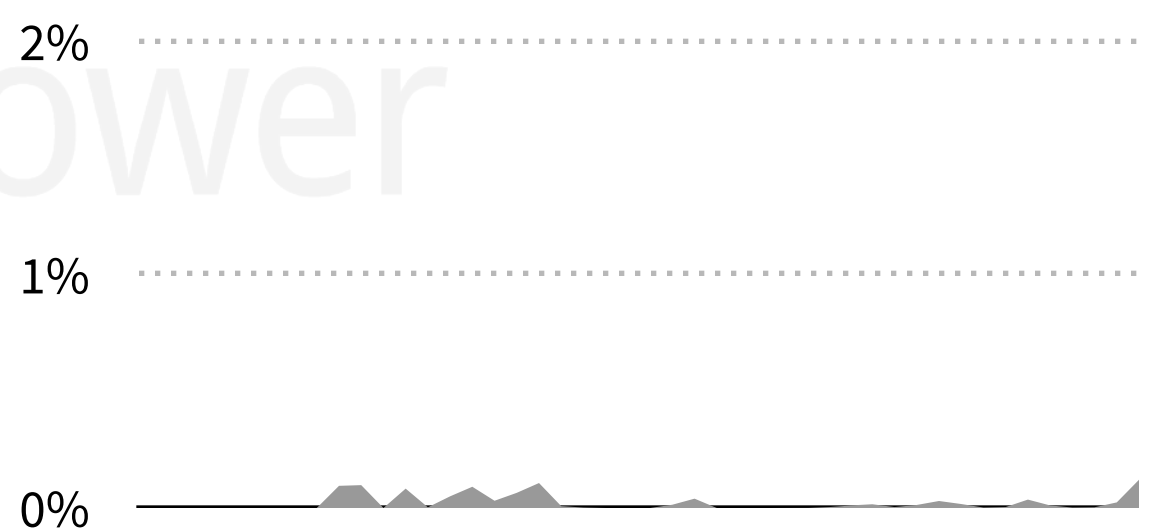
Facebook



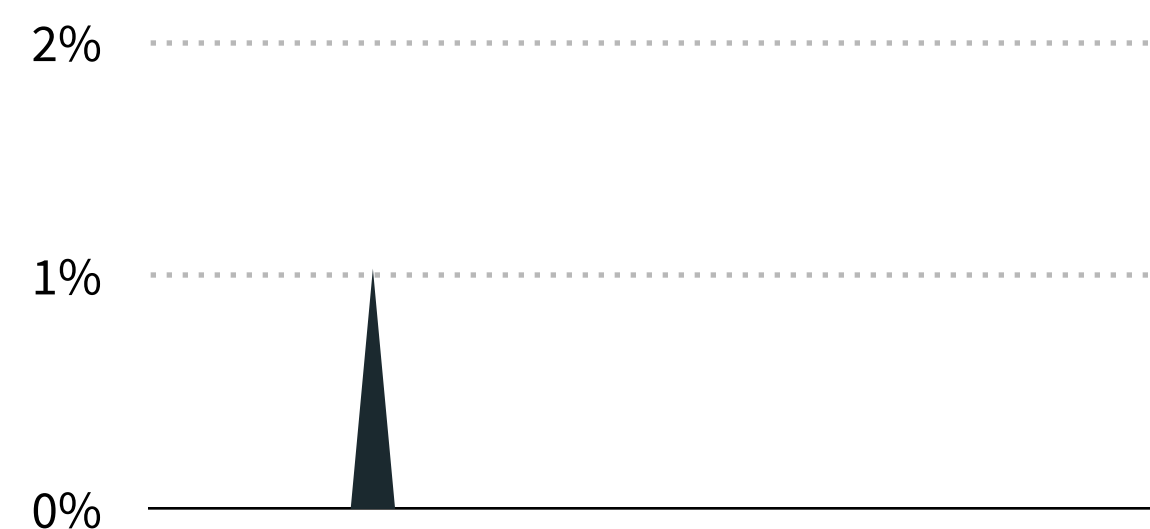
Instagram



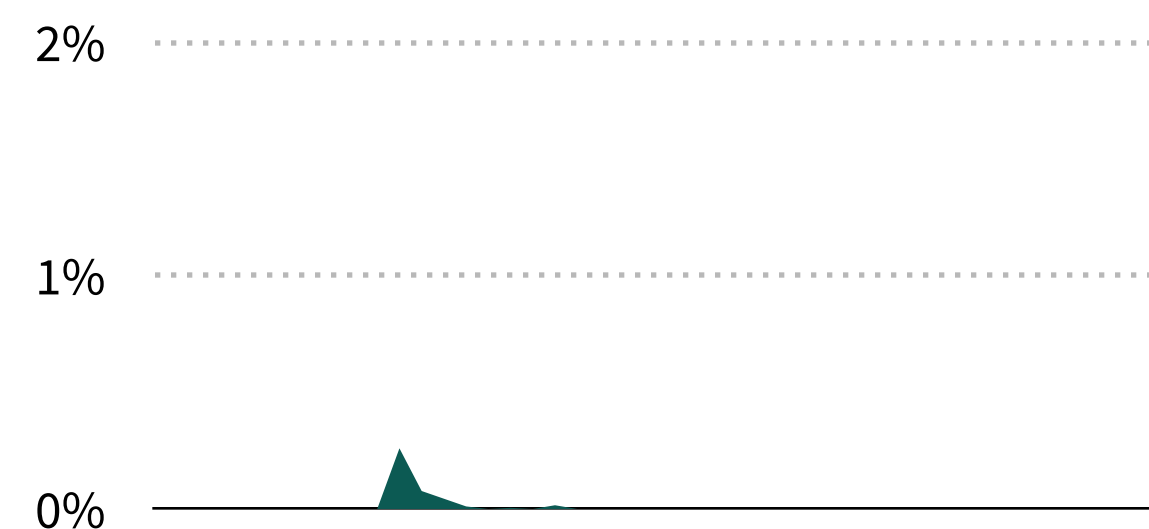
AdMob



ironSource



Vungle



MU Origin 3 has shifted UA strategies since its launch earlier this year. In May, campaigns began on networks including ironSource, Vungle, AppLovin, and Unity.

By June, MU Origin 3 scaled back advertising on these gaming-focused networks and shifted to social ad networks including YouTube and Facebook.

Ragnarok Origin's Ad Push Boosted UA

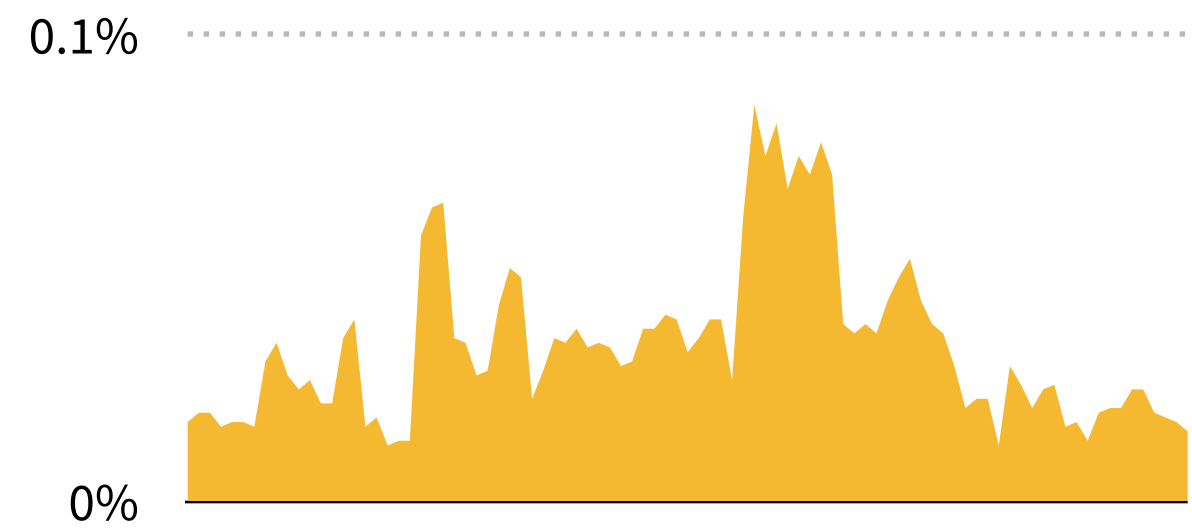
Ragnarok Origin U.S iOS Share of Voice



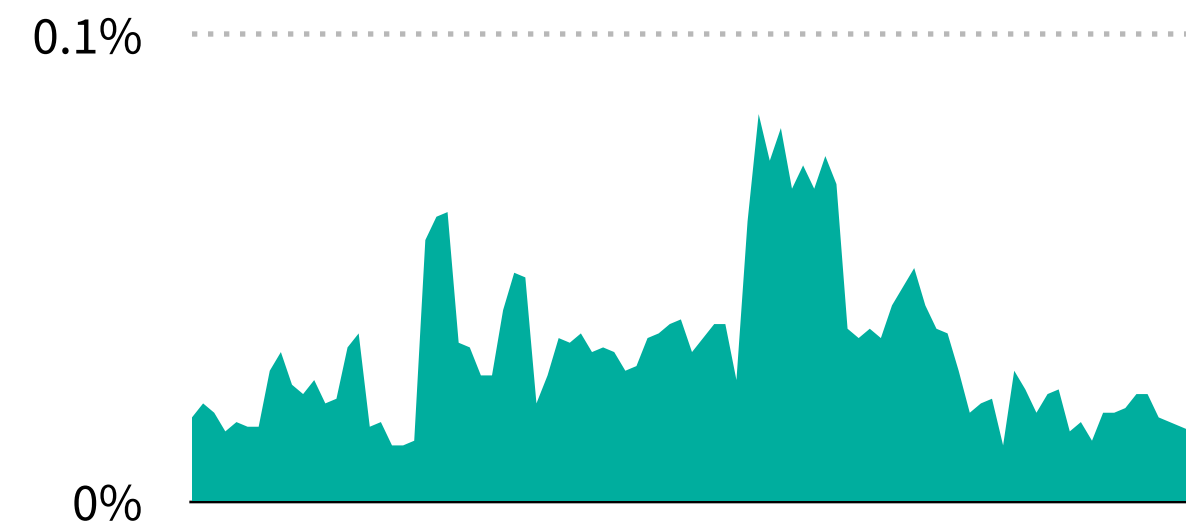
Ragnarok Origin
Gravity



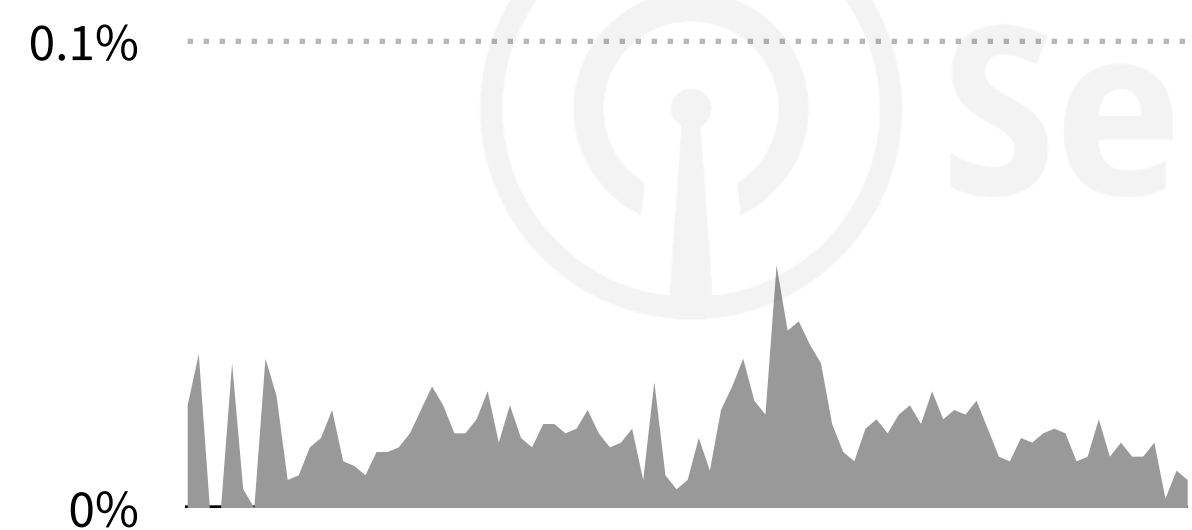
Instagram



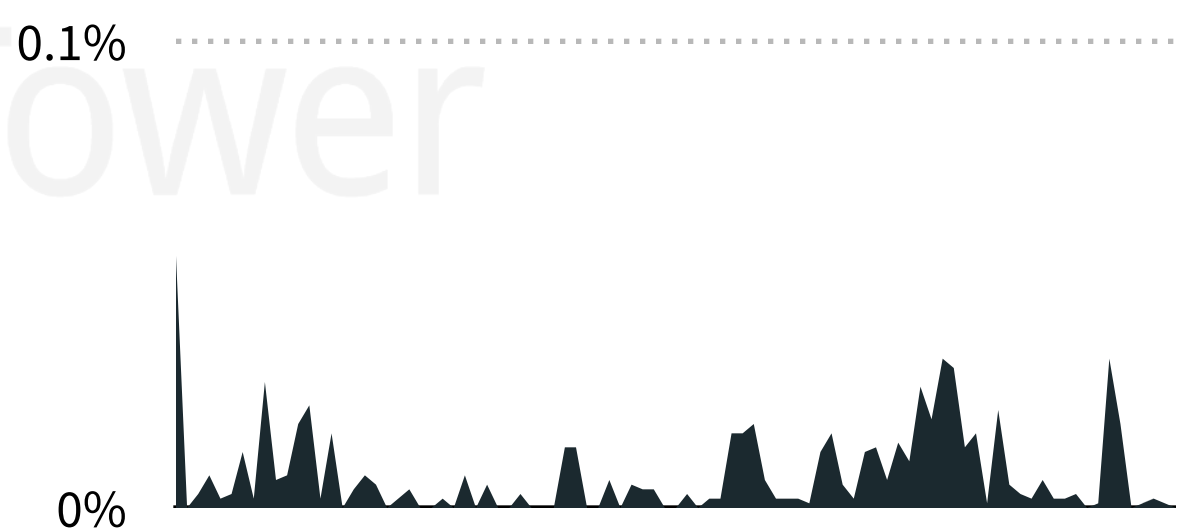
Facebook



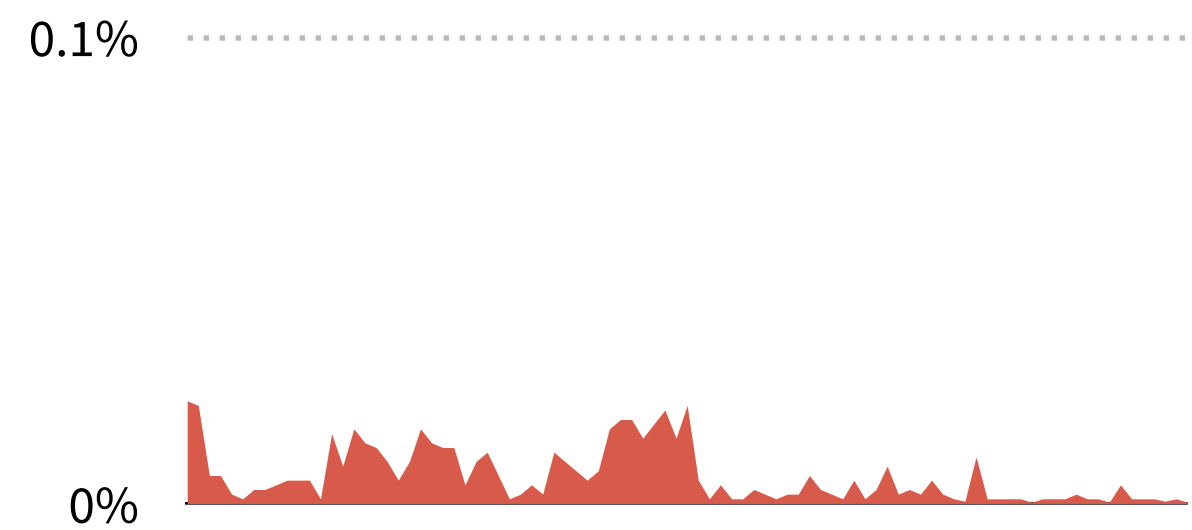
AppLovin



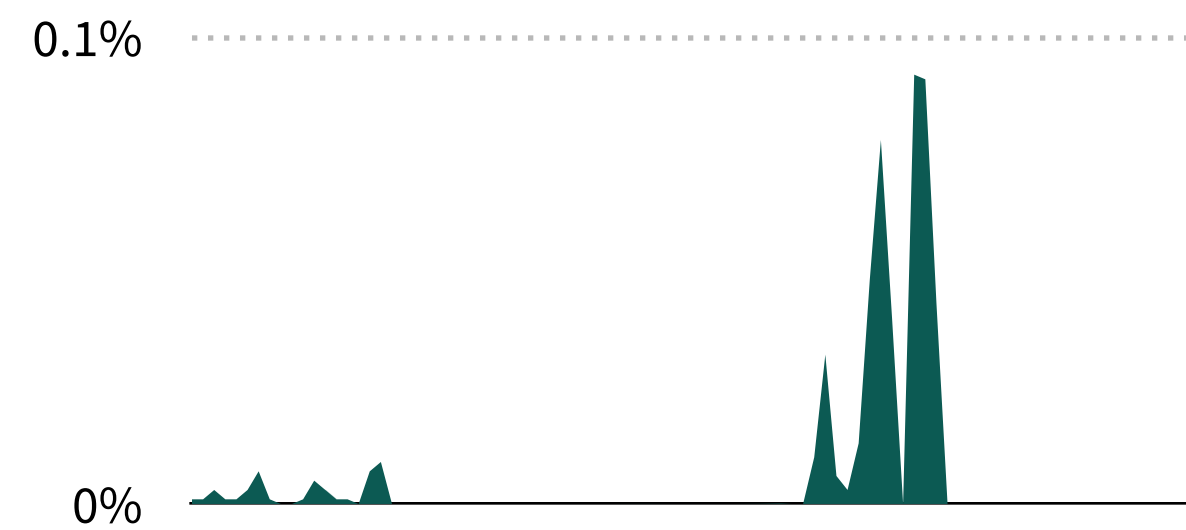
Vungle



AdMob



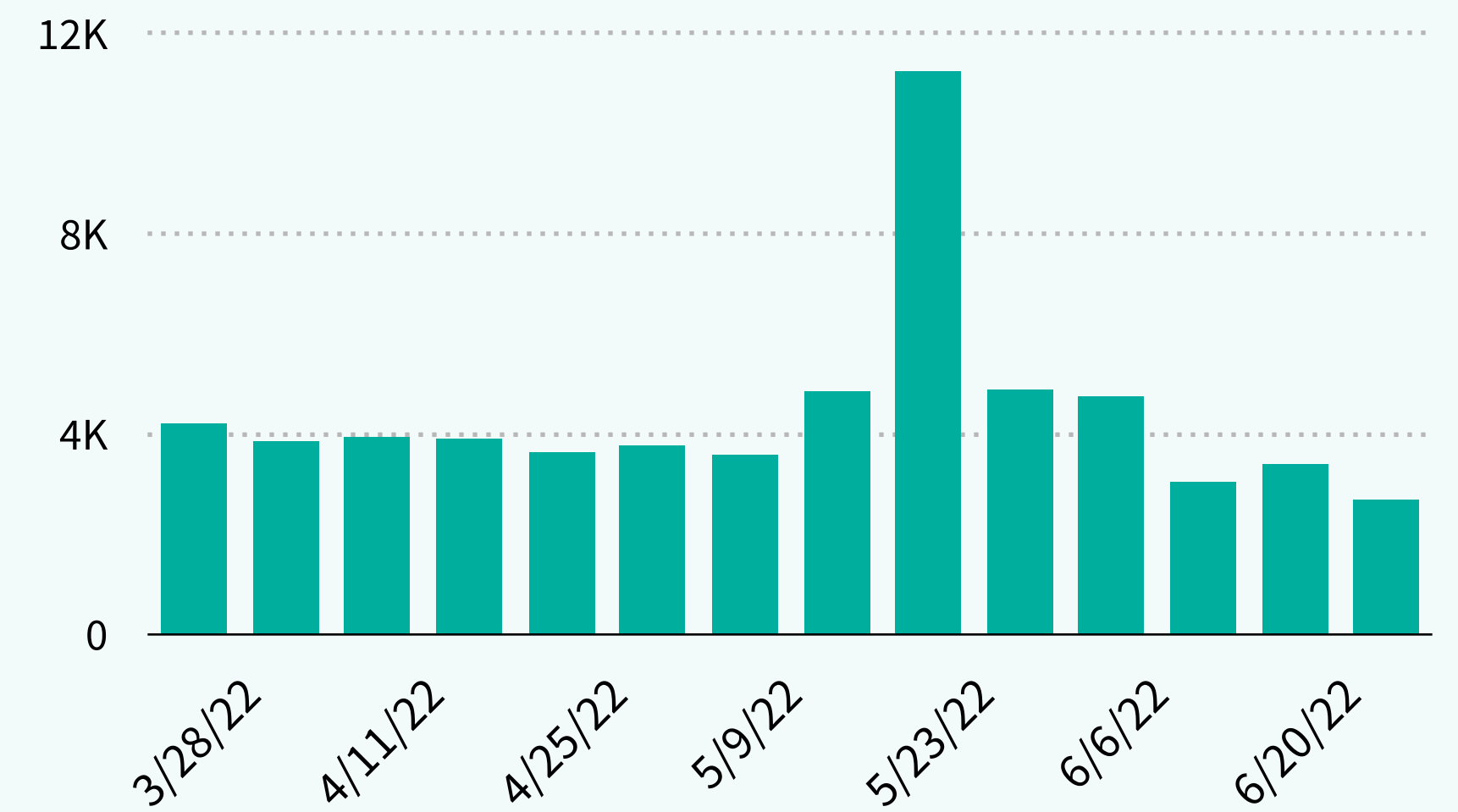
Unity



In May 2022, Ragnarok Origin was the No. 2 MMORPG by U.S. revenue. The game increased advertising on Instagram, Facebook, AppLovin, and Unity in late May and saw a large download boost as a result.

Ragnarok Origin scaled back UA in June and shifted most spend to social channels, while continuing to advertise on AppLovin.

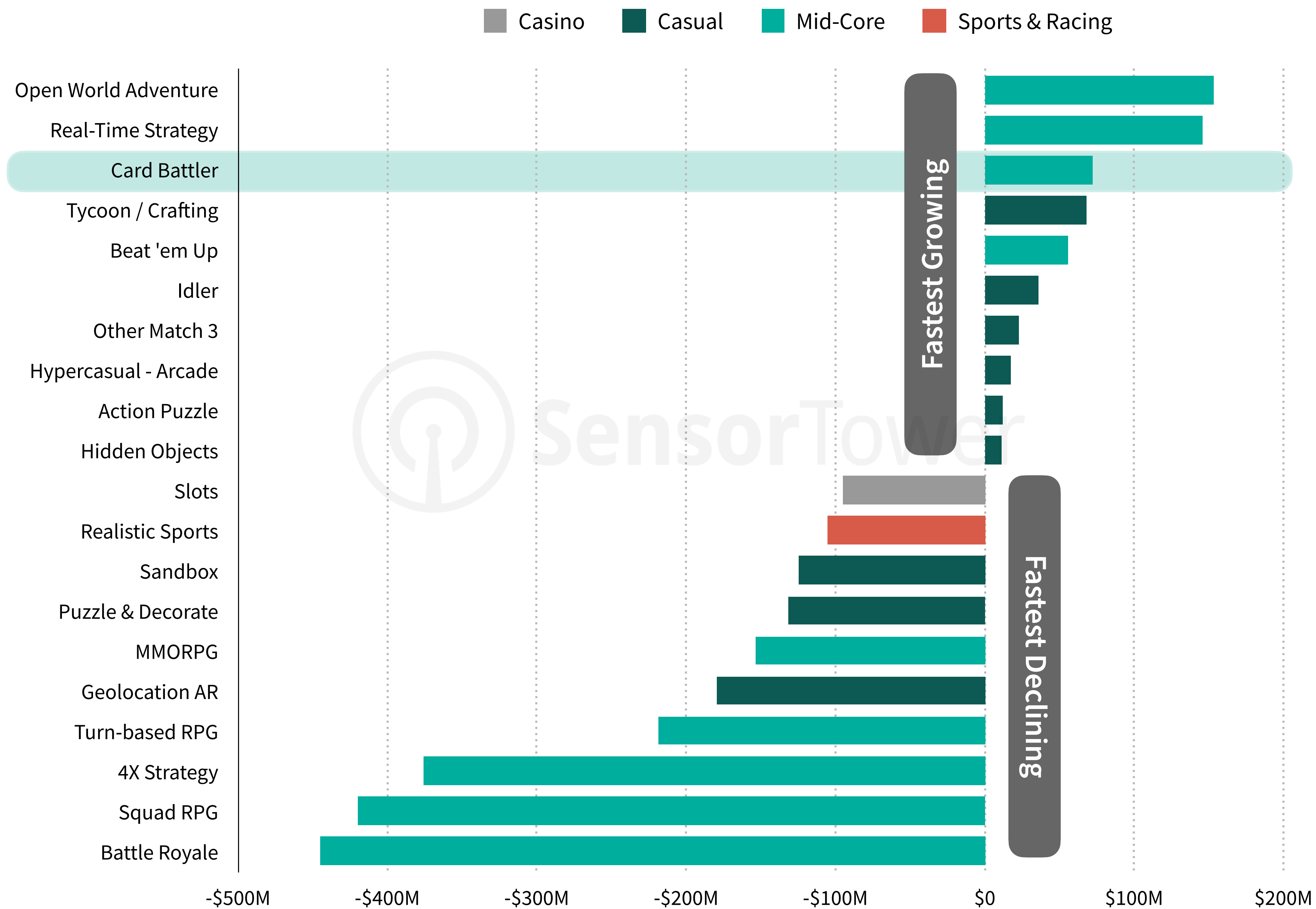
Ragnarok Origin U.S. App Store Downloads



Market Deep Dive:
Card Battler

Card Battler Is Among the Fastest-Growing Sub-Genres

Top 10 game sub-genres by year-over-year revenue growth and decline in H1 2022

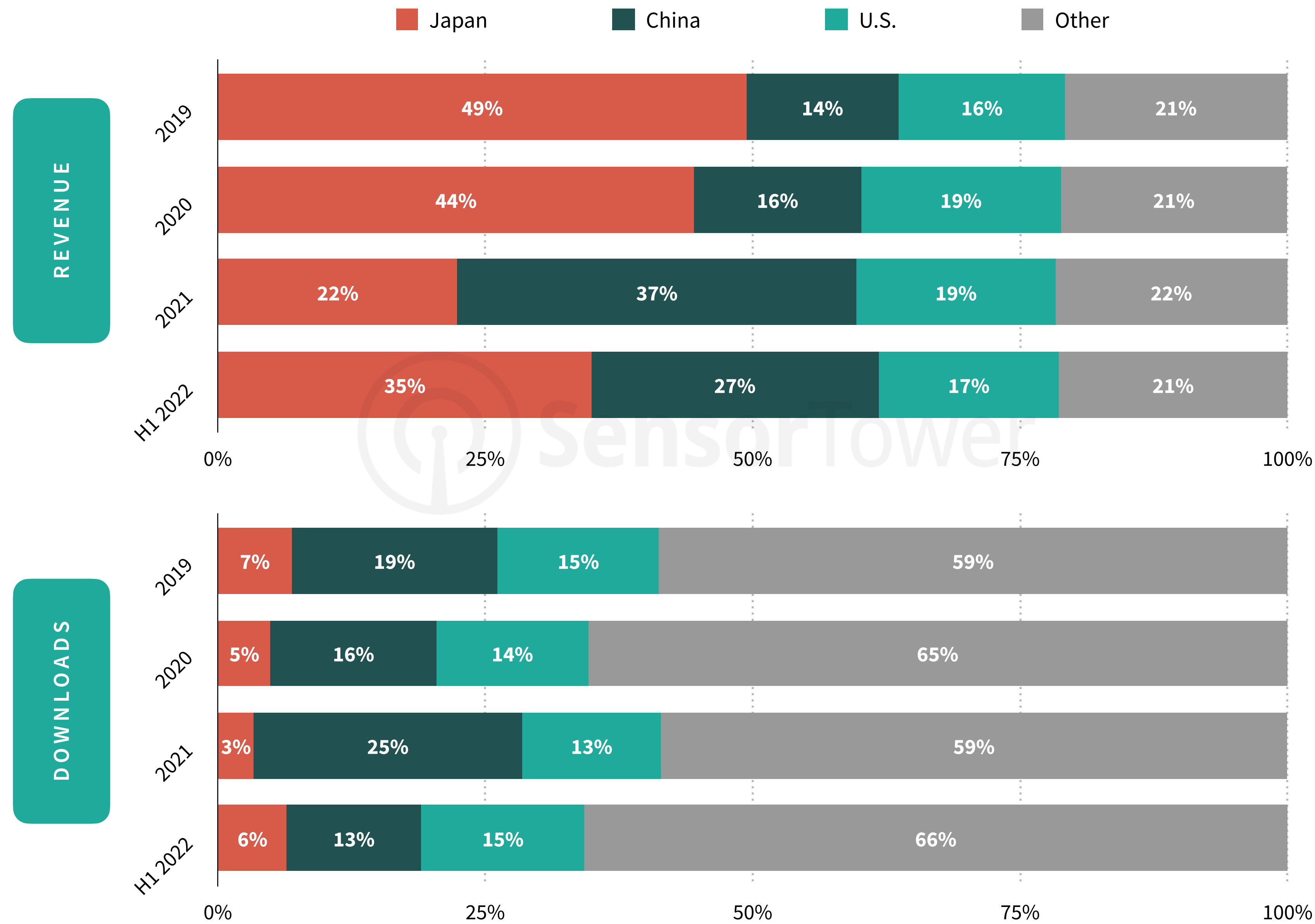


Mid-Core games saw very heterogeneous performance during H1 2022. Some of the Mid-Core sub-genres were the fastest growing, while others actually saw the largest declines.

Card Battler stands out as one of the top five fastest growing sub-genres on mobile.

APAC Is the Largest Market for Card Battler Titles

Card Battler sub-genre revenue and download market share by country



Asia accounts for the vast majority of mobile Card Battler revenue so far in 2022, with Japan and China alone representing 62 percent of player spending.

China was the second largest market both by player spending (27 percent) and downloads (13 percent). Note that this also only includes the App Store in China since Google Play is not available there.

The market share for downloads in the U.S. has remained stable around 15 percent during the during the past four years.

Note: Estimates include the App Store and Google Play. China only includes the App Store since Google Play is not available there.

More than Half of Top U.S. Card Battler Titles Have a Season Pass

Top grossing Card Battler titles by U.S. player spending in H1 2022

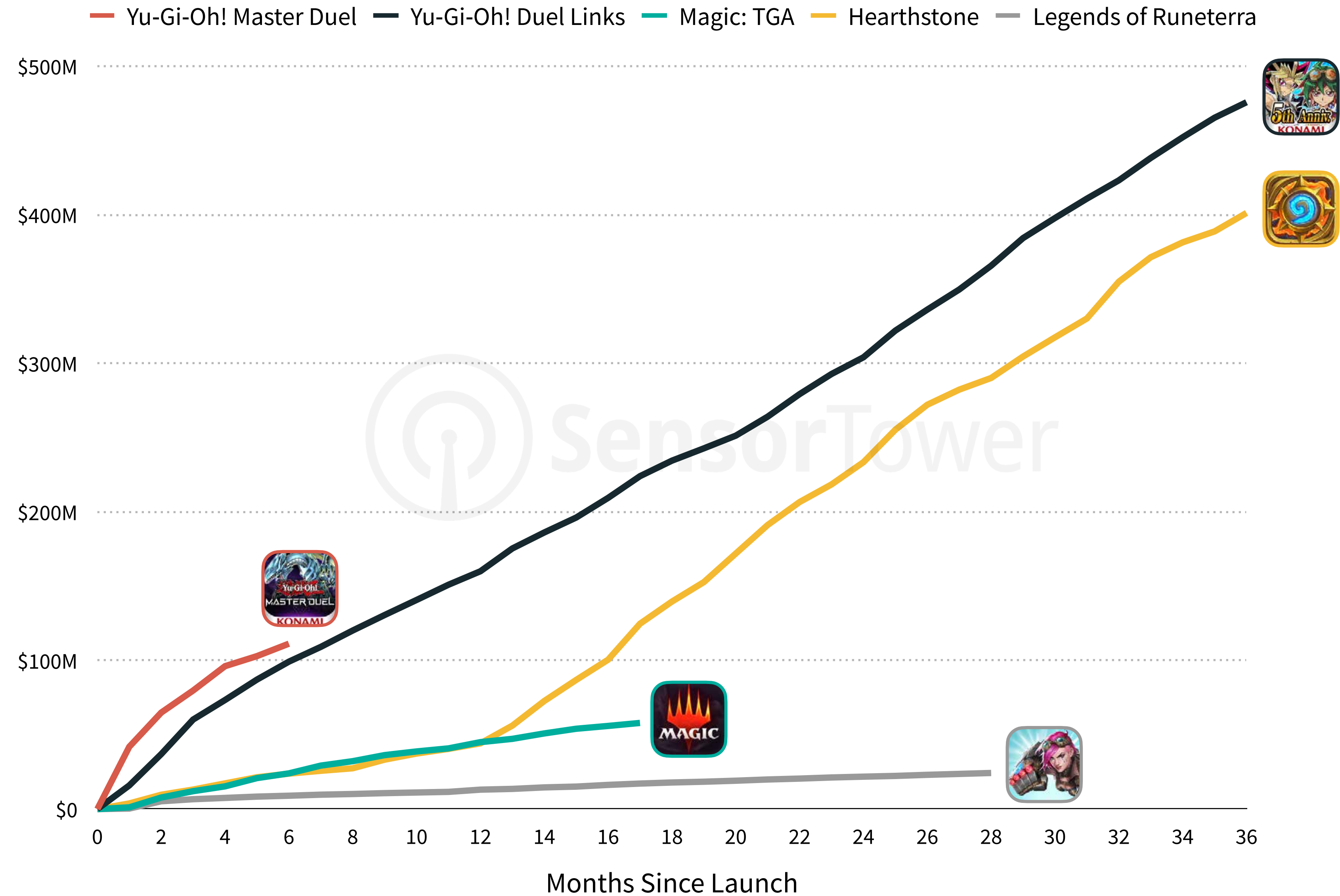


Season pass is a popular monetization technique among the top performing card battlers in the U.S., as six of the top 10 games utilize it to help drive engagement through each season.

Additionally, all of the top 10 grossing card battlers in the U.S. for the first half of 2022 utilize live ops among their monetization mechanics, and all but one include a starter pack.

Yu-Gi-Oh IP Tops the Card Battler Sub-Genre at Launch

Worldwide cumulative consumer spending for top mobile Card Battler titles in first three years

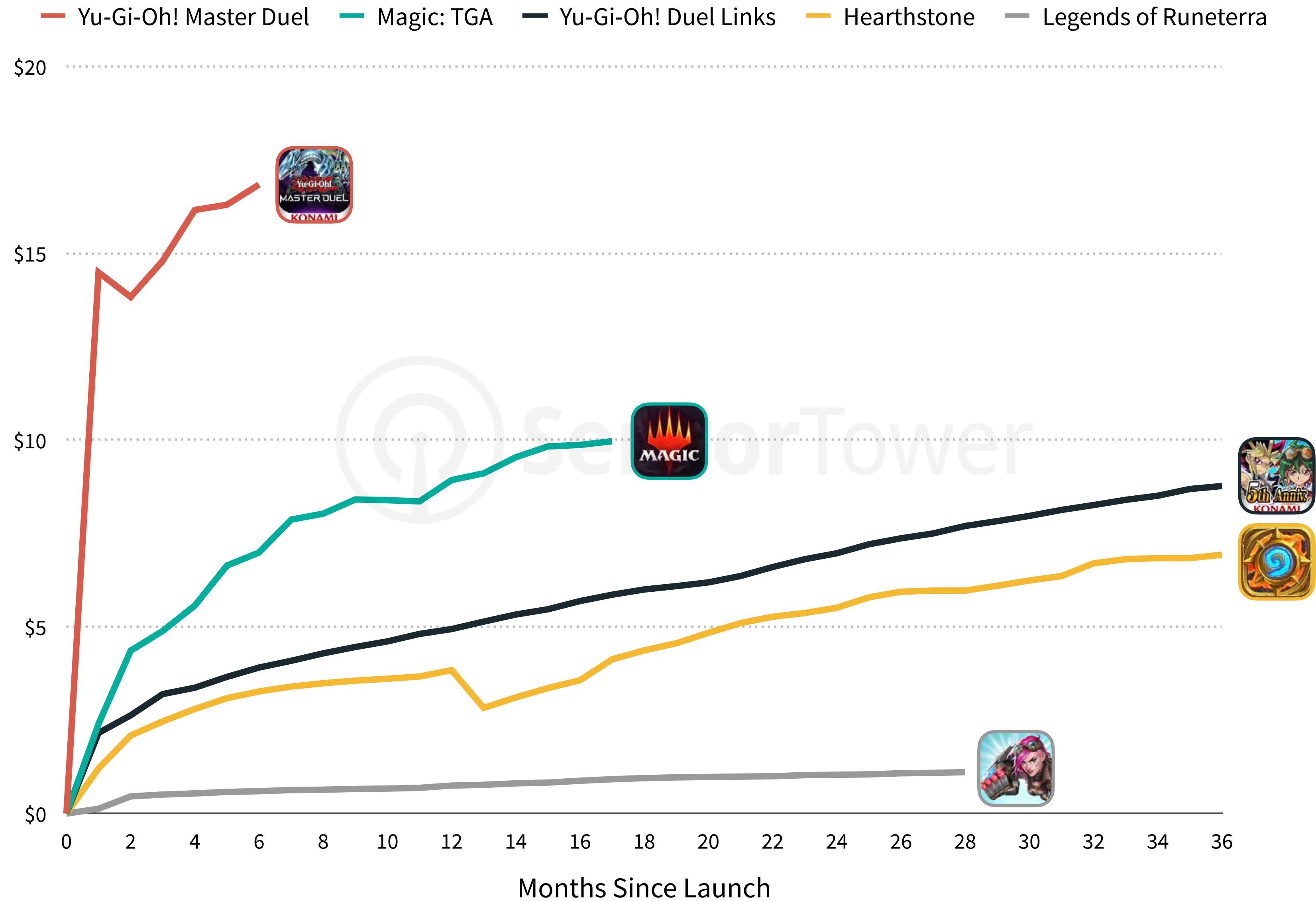


While the original Yu-Gi-Oh! Duel Link game netted an impressive five month post-launch total of more than \$80 million, Yu-Gi-Oh! Master Duel, the newest title in the series by Konami, topped its predecessor by grossing over \$100 million just 5 months after release. Yu-Gi-Oh! Master Duel, which was released in January 2022, is a more complex Card Battler and more faithful recreation of the original physical card game.

Hearthstone and Magic the Gathering were neck-and-neck five months after launch. Legends of Runeterra fell behind the pack in terms of monetizing its installed base.

Yu-Gi-Oh! Master Duel Sees Strong RPD at Launch

Worldwide Revenue Per Download for top mobile Card Battler titles in first three years



The newest title in the series, Yu-Gi-Oh! Master Duel, boasts the highest worldwide revenue per download (RPD) out of the cohort of top Card Battler games, with more than double the RPD of the trailing title, Magic: The Gathering Arena. The more faithful adaptation of the original physical Yu-Gi-Oh! card game was met with higher willingness to pay by new and legacy players of the series.

With the absence of a presence in China, Legends of Runeterra failed to monetize as effectively as other top Card Battler titles.

MTG Arena Appeals to Japanese IP to Double Down in APAC

Advertisements for the Hatsune Miku and WIT Studio promotional music videos

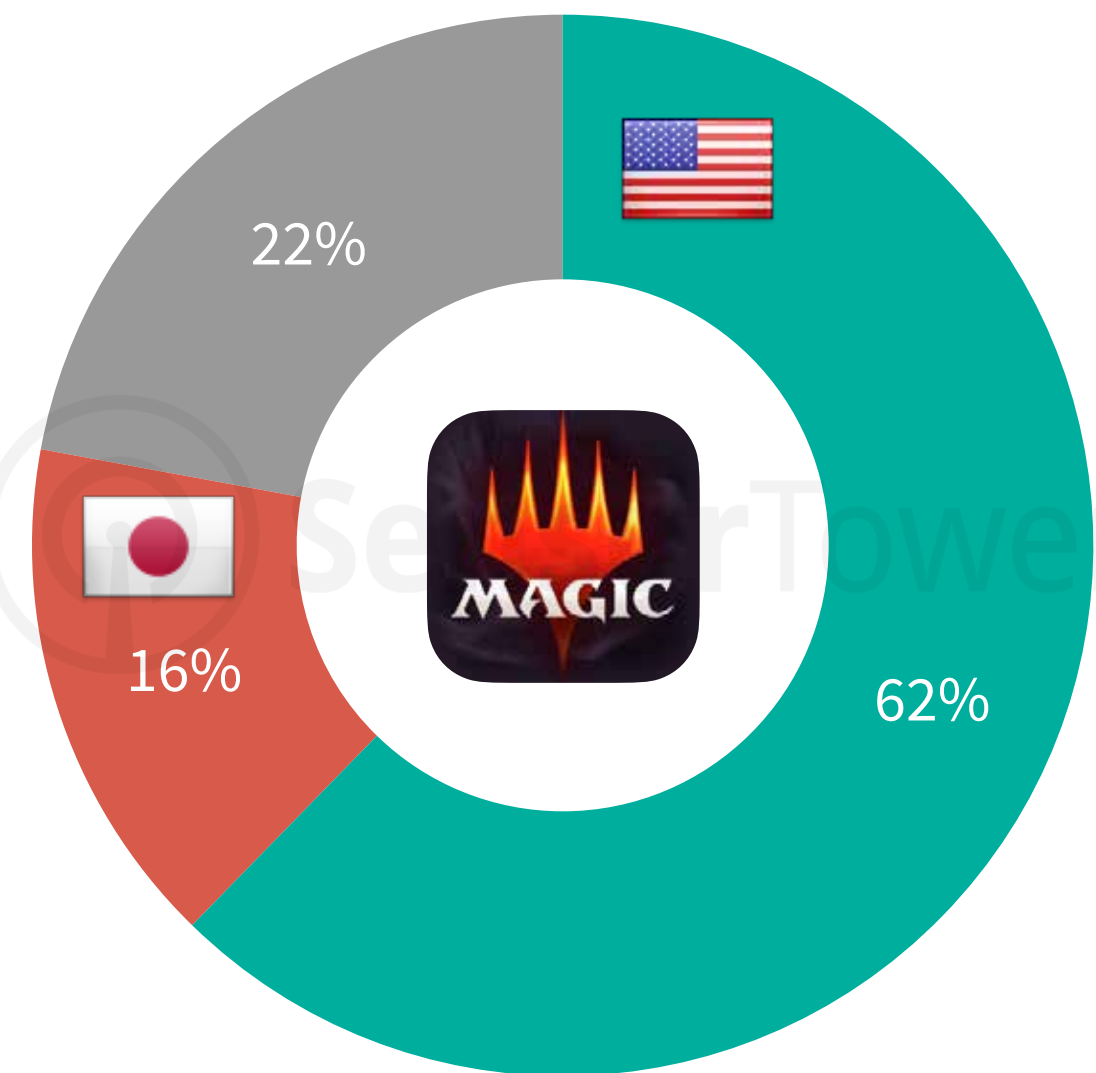


Magic: The Gathering Arena

Wizards of the Coast

GEO SPLIT: REVENUE

- U.S.
- Japan
- Other



JAPANESE IP ADVERTISING



In early February 2022, a collaboration was announced between the Japanese virtual idol Hatsune Miku and Magic: The Gathering to promote its newest expansion, Kamigawa: Neon Dynasty. While Hatsune Miku doesn't appear as a card in the expansion, a full-length music video was added to the Hatsune Miku YouTube channel.

MTG Arena also partnered with the Japanese animation studio WIT Studio (Attack on Titan) to create an animated music video that has amassed close to 4 million views on YouTube so far.

While Magic: The Gathering monetizes primarily outside of Asia, its recent collaboration with Hatsune Miku and WIT Studio is an attempt to appeal to the Japanese player base along with anime/Vocaloid fans from other regions.

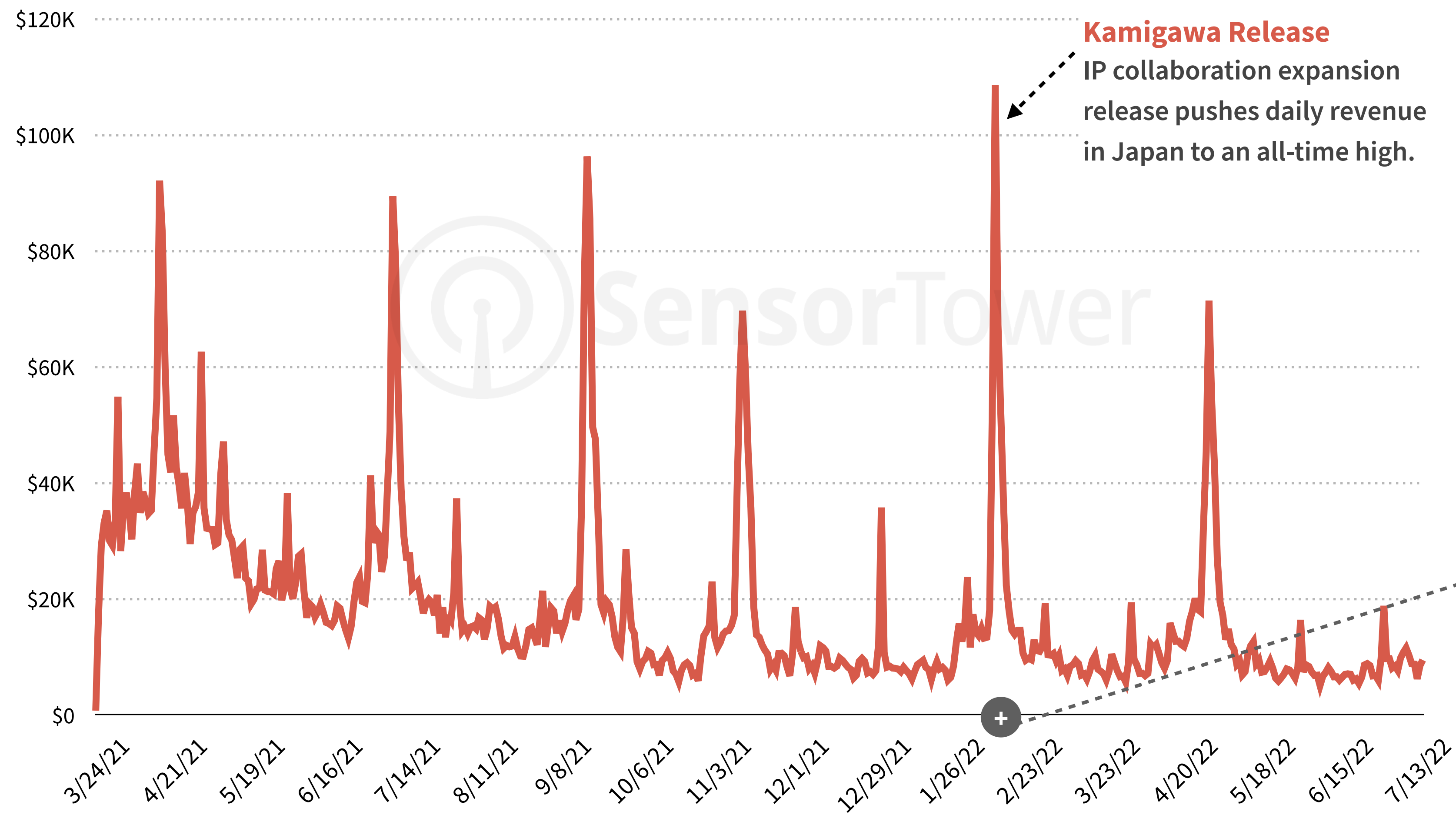
MTG's Kamigawa Expansion Boosts Spend in Japan

Magic: The Gathering Arena daily consumer spending in Japan, App Store and Google Play



Magic: The Gathering Arena

Wizards of the Coast



While only about 16 percent of Magic: The Gathering's total revenue comes from Japan, the collaborations and promotional campaigns with Japanese IP, animation studios, and musicians appeared to resonate in the region for the Kamigawa expansion, leading to the highest single day revenue in Japan for the game since launch.

The huge asian market for Card Battler titles affects MTGA roadmap, releasing Japanese IP collaborations.

App Update Timeline: MTGA Version 2022.13.0

KAMIGAWA: NEON DYNASTY
Kamigawa: Neon Dynasty is a world governed by the 'rule of cool.' The latest card set on Magic: The Gathering Arena is a neon-dripped futurescape filled with epic scenery.

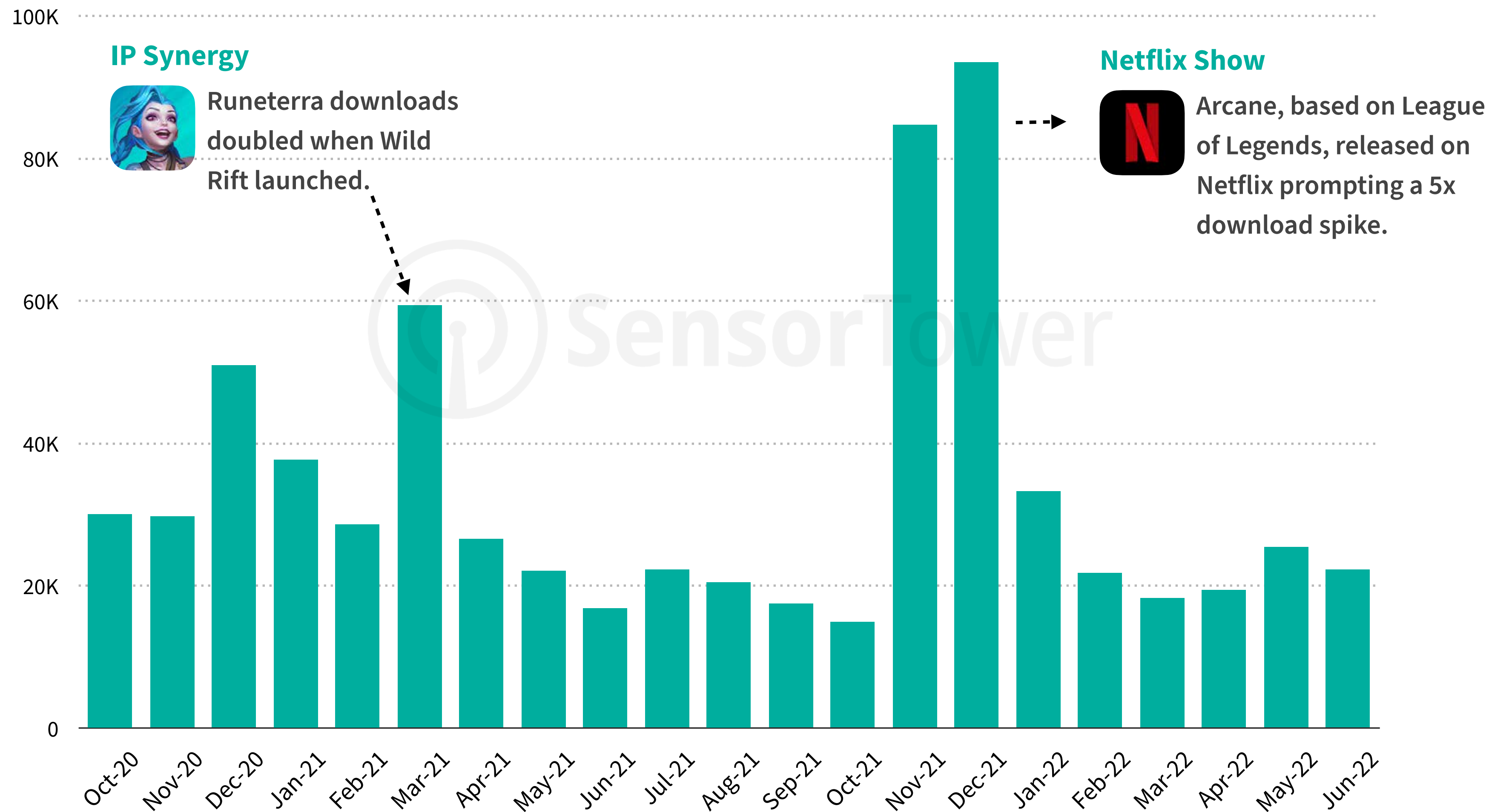
Wild Rift and Arcane Boost Runeterra Downloads

Legends of Runeterra monthly U.S. downloads, App Store and Google Play



Legends of Runeterra

Riot Games



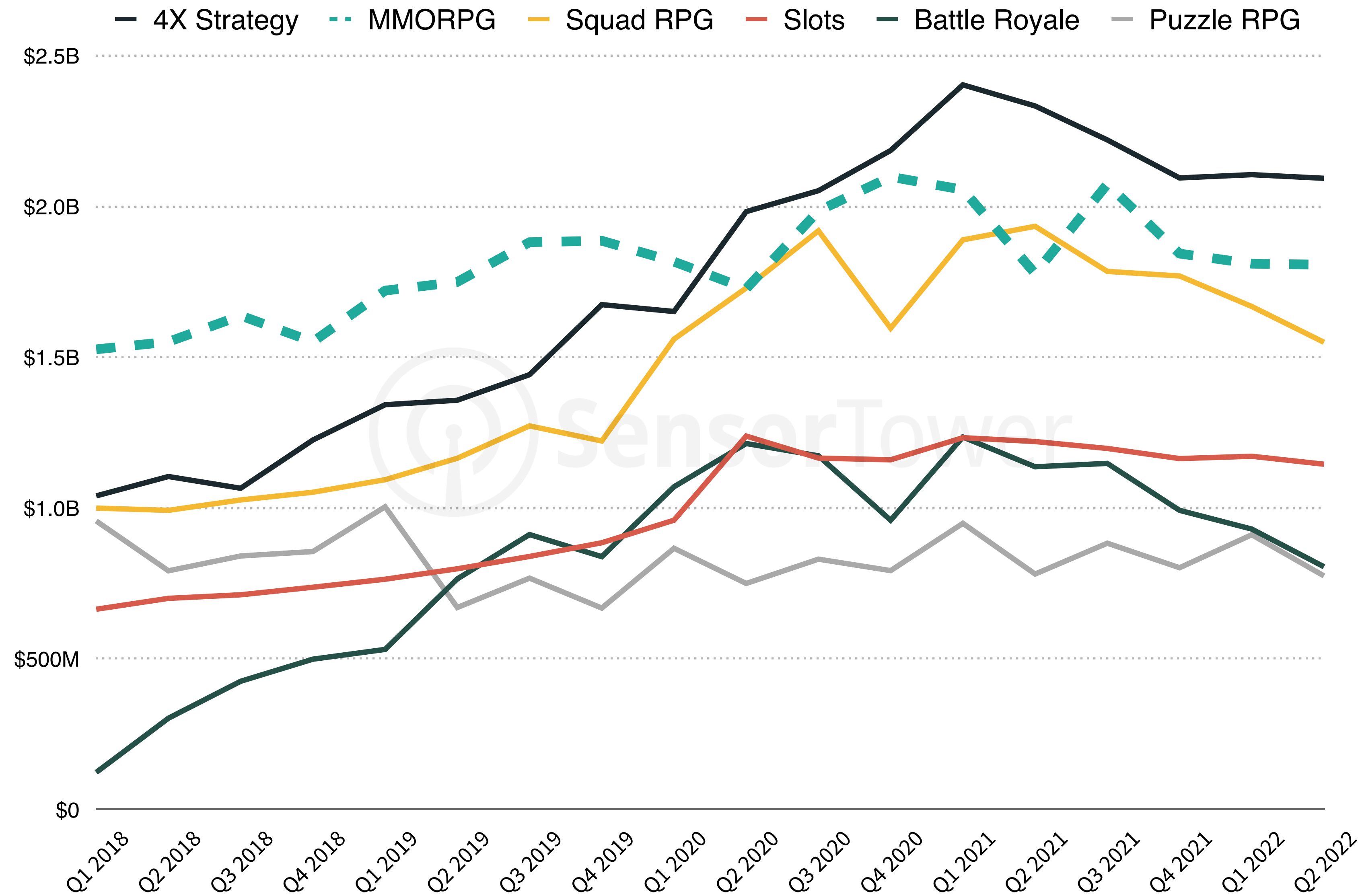
The launch of League of Legends: Wild Rift in the U.S. not only brought an influx of players to the game itself, but also carried over a spike to Legends of Runeterra as well. During the launch month of Wild Rift in March 2021, Runeterra saw an 107 percent increase in downloads compared to the previous month.

Runeterra also saw a very significant spike in U.S. downloads following the release of Riot's animated series Arcane on Netflix in November 2021. This contributed to the second largest monthly spike in downloads for Runeterra since launch.

Market Deep Dive:
MMORPG

MMORPG Is the No. 2 Sub-Genre for Player Spending

Worldwide revenue trends for top game sub-genres

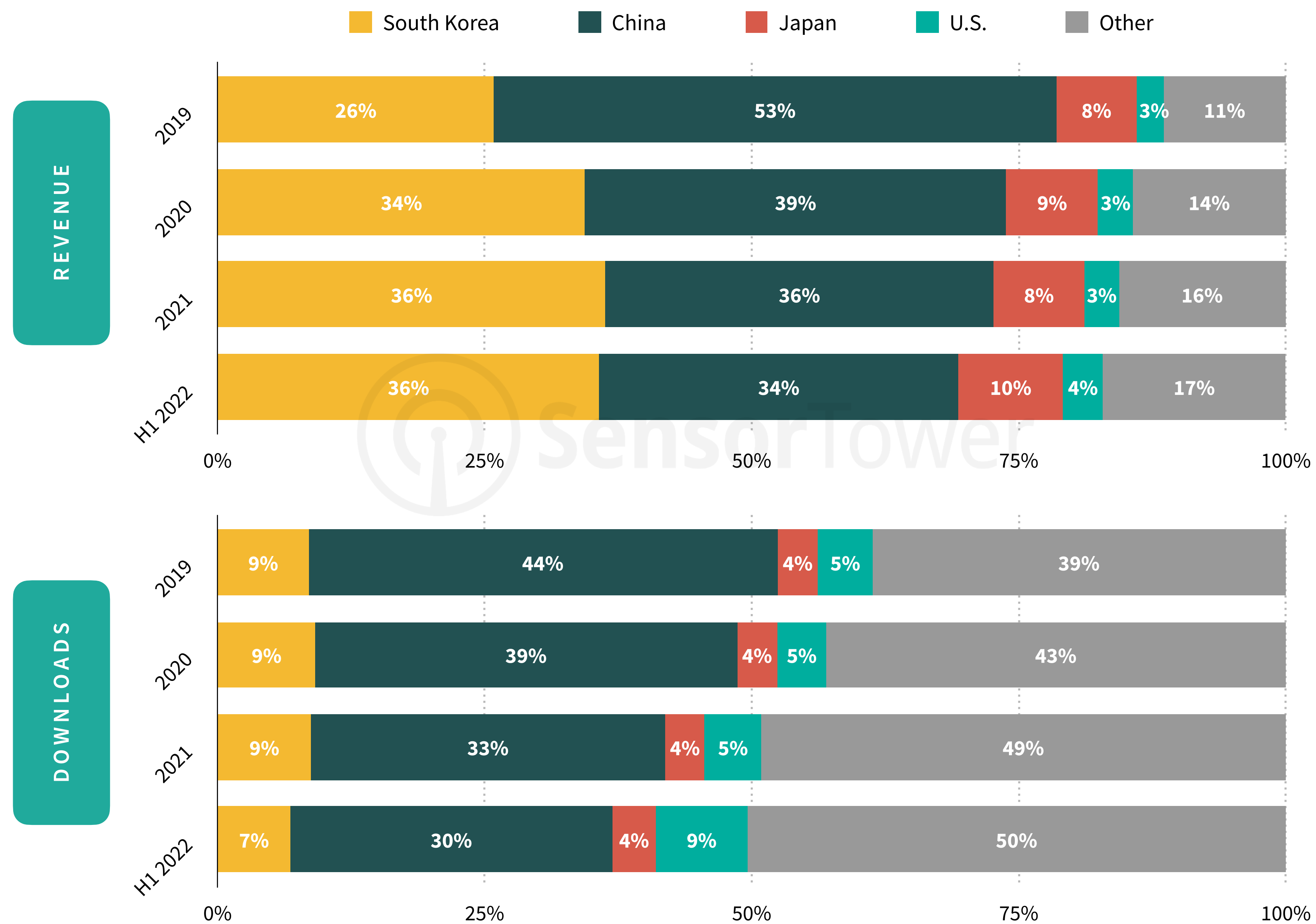


MMORPG was the only genre to surpass \$6 billion in global player spending in 2018. It has managed to maintain solid growth into 2022 and now ranks as the No. 2 genre behind 4X Strategy.

While the MMORPG sub-genre has seen steady growth, some others, including 4X Strategy, Squad RPG, and Slots, saw a more significant boost in player spending at the start of the pandemic. These sub-genres have only managed to retain part of this boost, as each has seen a year-over-year decline in Q2 2022.

Asia Still Dominates the MMORPG Market

MMORPG revenue and download market share by country



MMORPGs have struggled to gain a foothold in any markets outside Asia. South Korea, China, and Japan combined for roughly 80 percent of all MMORPG revenue in H1 2022.

However, MMORPGs have shifted their attention towards other markets for new user acquisition. The U.S. accounted for nearly 10 percent of MMORPG installs in H1 2022, up from 5 percent a year prior, largely driven by the launch of Diablo Immortal. The question now is whether U.S. players will be willing to spend in MMORPGs like their counterparts in Asia.

Note: Estimates include the App Store and Google Play. China only includes the App Store since Google Play is not available there.

Diablo Immortal Launch Leaves Other MMORPGs in the Dust

Top grossing MMORPG titles by U.S. player spending in H1 2022

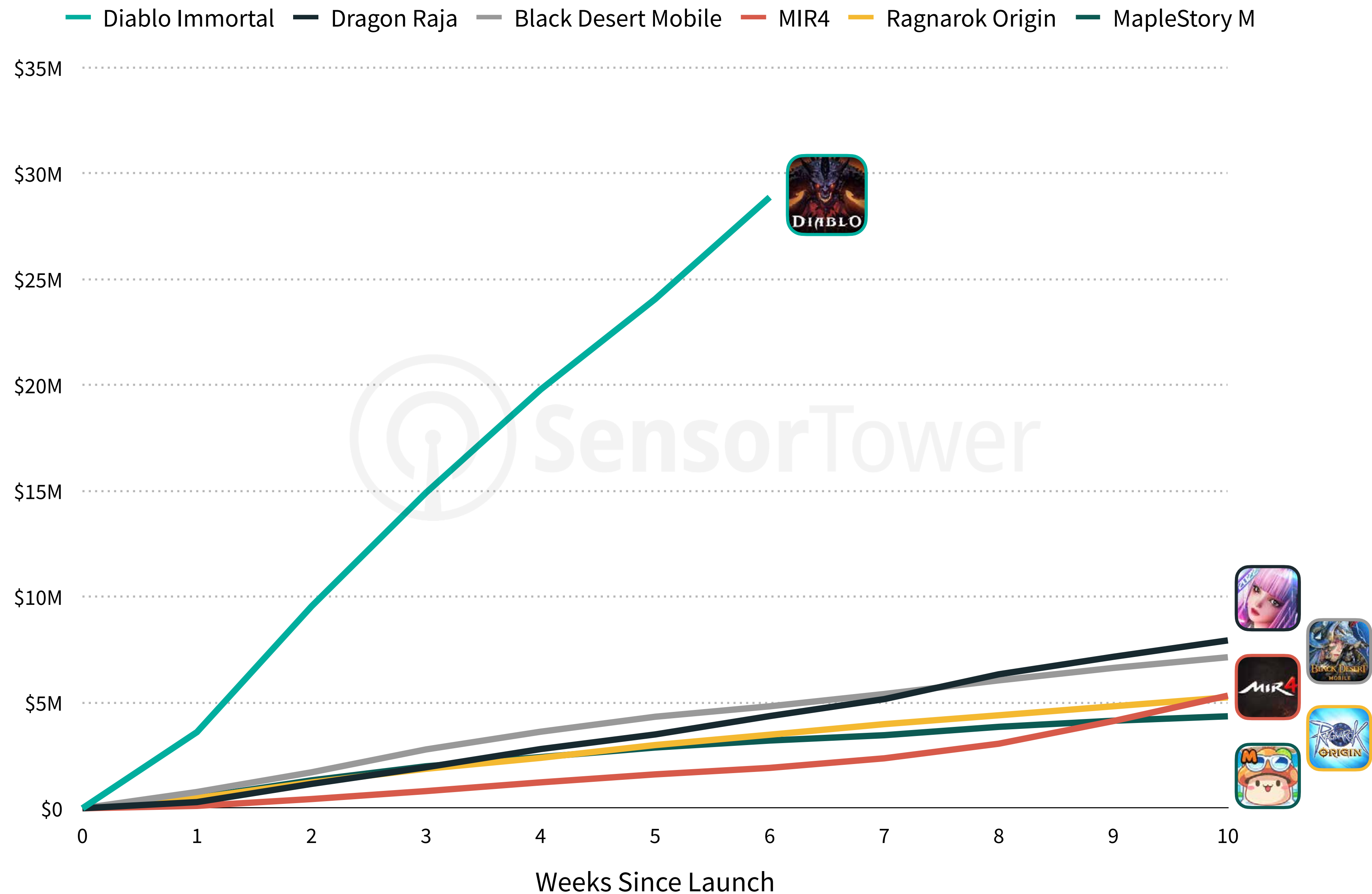


Diablo Immortal has already surged to unprecedented levels for a MMORPG in the U.S. Despite not launching until early June, Diablo Immortal led all MMORPG by U.S. player spending in H1 2022 with \$22 million.

Only one other game, MapleStory M, had more than \$10 million in U.S. player spending in H1 2022. This points to the challenge that other MMORPGs have had in the U.S. compared to top Asian markets. The U.S. only accounted for 4 percent of MMORPG player spending in H1 2022.

Diablo Immortal Is in Uncharted Territory in the U.S.

U.S. cumulative consumer spending for top MMORPG during launch period

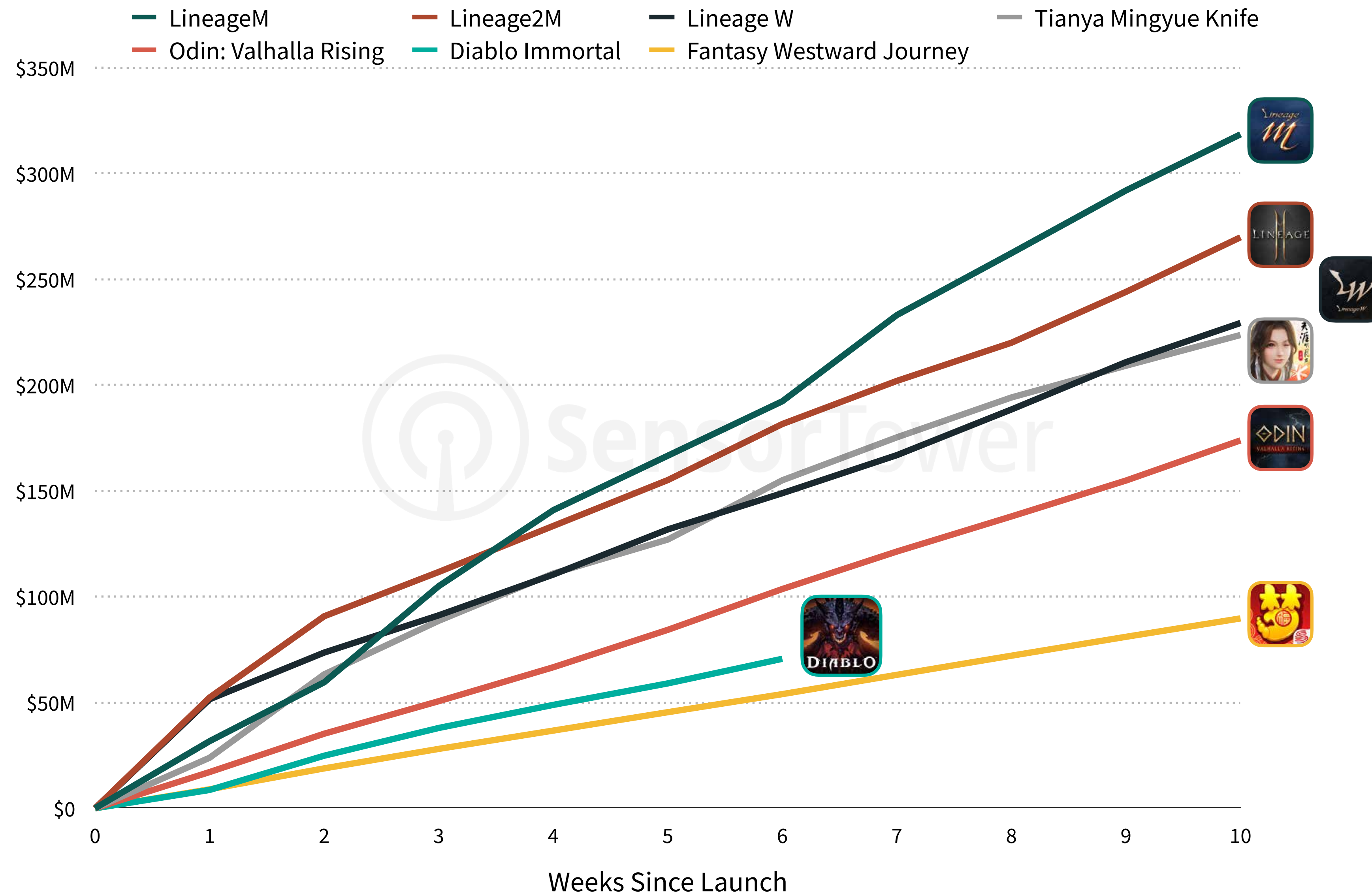


Diablo Immortal has clear dominance in the U.S. MMORPG market with more than \$28 million in player spending in its first six weeks. No other MMORPG had more than \$5 million that soon after launch.

Diablo Immortal is attempting to be the first huge mobile MMORPG hit in the U.S. In the first half of 2022, MMORPGs only accounted for 3.2 percent of Mid-Core revenue in the U.S., compared to 15.2 percent of Mid-Core revenue globally.

Diablo Immortal Trails Top Asian Titles in Their First Few Months

Worldwide cumulative consumer spending for top MMORPG during launch period



Spending in NCSOFT’s Lineage franchise has outpaced all other MMORPGs within the first few months. LineageM, Lineage2M, and Lineage W all managed to surpass \$225 million in their first 10 weeks, with LineageM reaching \$300 million.

Despite Diablo Immortal’s massively successful launch, the U.S. still appears to lack the monetization potential of Asia for MMORPGs. Diablo Immortal’s \$70 million in its first 6 weeks ranks behind the top Lineage titles and Odin: Valhalla Rising.

Understanding Local Markets Is Still Key for RPG Developers

Top grossing RPG titles by worldwide player spending in June 2022



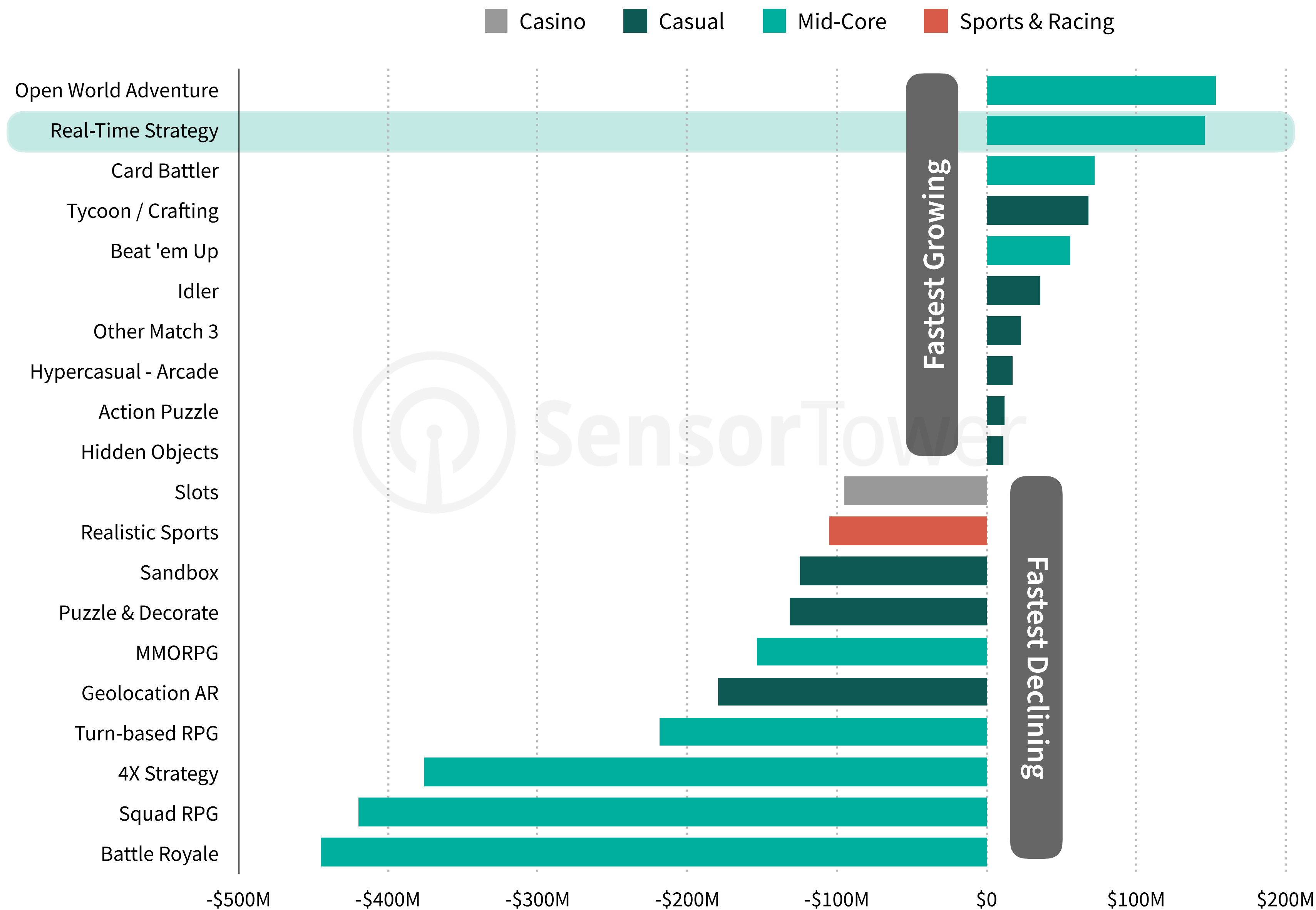
Top RPGs come from publishers in their **local markets**. For nine of the top 10 RPGs by player spending, their top market matched their publisher's region of operation. Six of these titles use an IP popular in their most successful country, including the hugely popular Lineage franchise and several anime in Japan.

China, Japan, and South Korea provide a lot of upside for RPGs. Titles including Fantasy Westward Journey, Fate/Grand Order, LineageM, and Uma Musume Pretty Derby ranked among the top five in June 2022 with at least 80 percent of their revenue coming from just one market.

Market Deep Dive:
Real-Time Strategy

Real-Time Strategy Is a Top Growing Sub-Genre in the U.S.

Top 10 game sub-genres by year-over-year revenue growth and decline in H1 2022

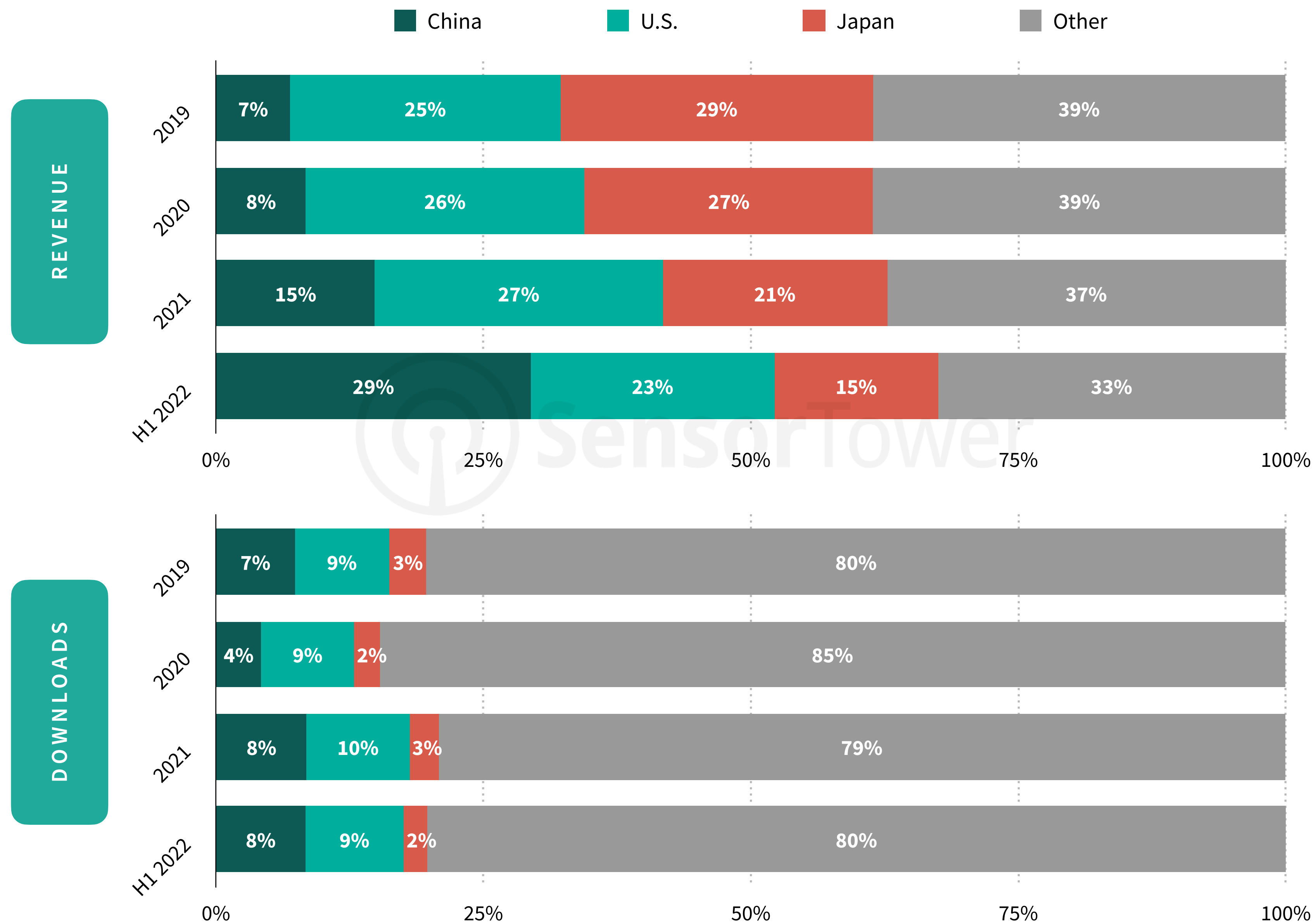


Real-Time Strategy was the second fastest growing sub-genre during H1 2022, with revenue increasing by more than \$145 million, mainly due to the excellent performance of Clash Royale from Supercell. The fastest growing sub-genre was Open World Adventure, with consumer spending increasing by more than \$150 million, driven by the global scaling of Genshin Impact.

On the other hand, 4X Strategy was among the fastest declining sub-genres in H2 2022. Rise of Kingdoms and State of Survival contributed to this decrease.

Teamfight Tactics' Emergence in China Disrupted the Market

Real-Time Strategy revenue and download market share by country



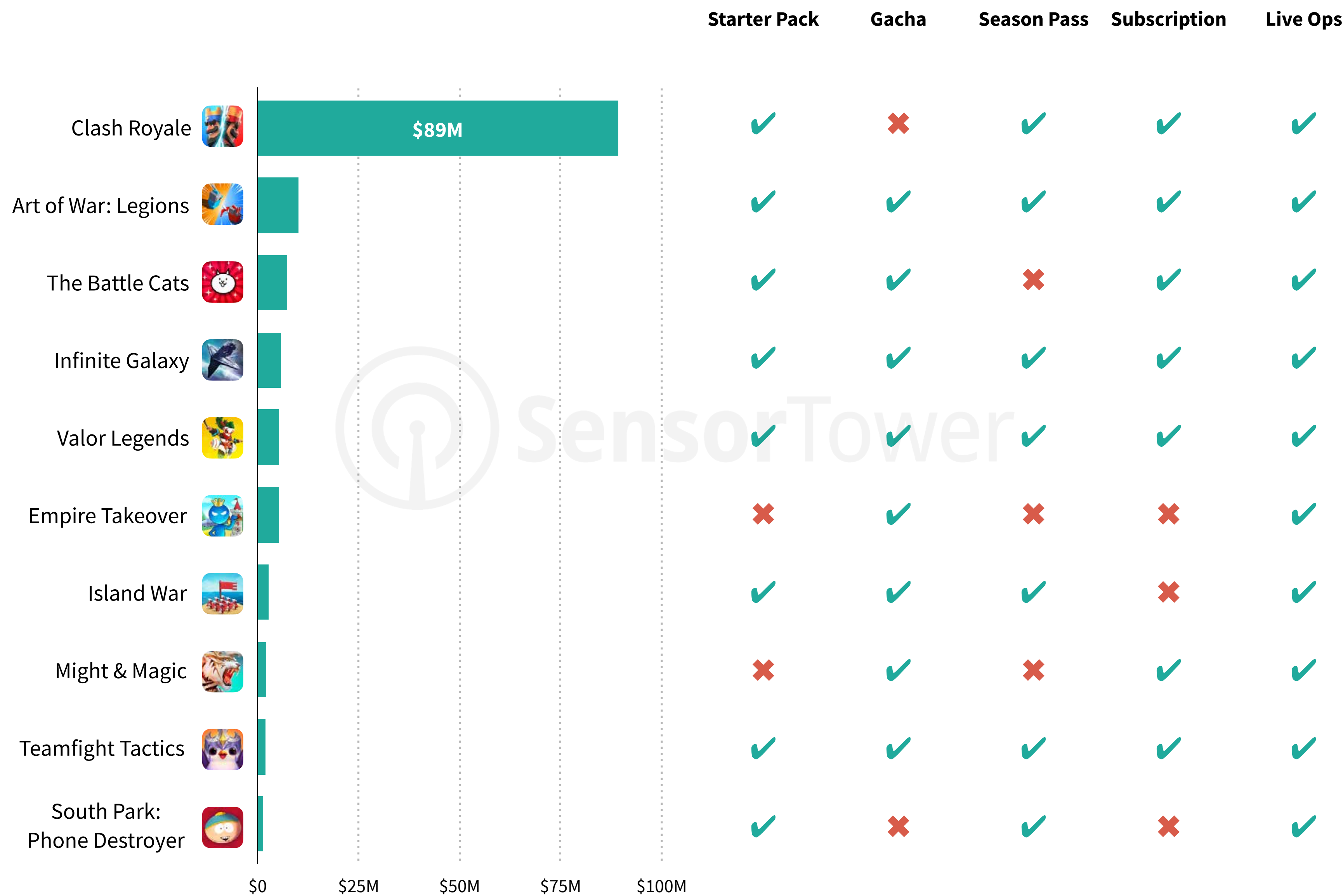
Entering 2021, the U.S. had consistently been the top market for Real-Time Strategy games, largely driven by the success of Clash Royale in the country. The U.S. led the way with 27 percent of revenue and 10 percent of downloads in 2021.

This changed in H1 2022 with the rise of Teamfight Tactics in China. 84 percent of Teamfight Tactics revenue has been from China, helping it surpass the U.S. in terms of player spending.

Note: Estimates include the App Store and Google Play. China only includes the App Store since Google Play is not available there.

Clash Royale Is the Clear Standout in the U.S.

Top grossing Real-Time Strategy titles by U.S. player spending in H1 2022



Clash Royale from Supercell had nearly \$90 million in U.S. player spending in H1 2022—no other title had more than \$10 million over that period. Clash Royale has found considerable success using a season pass and subscription.

Many of the top games come from publishers located outside of the U.S. All of the top five are from publishers based in Europe or Asia, including Clash Royale (Finland), Art of War: Legions (Hong Kong), The Battle Cats (Japan), Infinite Galaxy (China), and Valor Legends (Singapore).

Clash Royale Remains Unthroned in the Real-Time Strategy Space

Top grossing Real-Time Strategy games by worldwide player spending in H1 2022



Clash Royale has established itself as the clear leader in the Real-Time Strategy sub-genre following its launch in 2016, and continued to rank as the No. 1 revenue generating title in the sub-genre in H1 2022, grossing nearly \$200 million.

A number of titles have tried to copy the format that Clash Royale created on mobile—a mobile-first, simplified, two-lane MOBA—but high profile attempts such as Star Wars Force Arena, Gears of War Pop, and Tom Clancy's Shadowbreak have all failed to build a significant audience.

None of the top Real-Time Strategy titles come from publishers based in the U.S., and Clash Royale is the only one from a publisher based outside of Asia.

Conclusion

Executive Summary: Highlights



The mobile game market is correcting after seeing a spike in revenue and downloads at the start of the COVID-19 pandemic. Positive revenue growth is projected to return in 2023, with total consumer spending reaching \$117 billion by 2026.



Diablo Immortal has seen unprecedented success for an MMORPG in the U.S. and will look to emulate the many hit titles in Asia that use popular IP in the region. Eighty percent of MMORPG revenue in H1 2022 was from China, South Korea, or Japan, with just 4 percent from the U.S.



While less than 50 percent of YouTube's Share of Voice comes from games, the ad network is a popular choice for the Strategy and RPG genres. Top MMORPG titles used creatives that highlight characters, gear, and snippets of gameplay.



Card Battlers still rely on IPs to boost adoption. Magic: The Gathering Arena utilized Japanese IP to boost adoption in the region. Marvel SNAP is also expected to launch this year, carrying Disney's massively popular IP with it.

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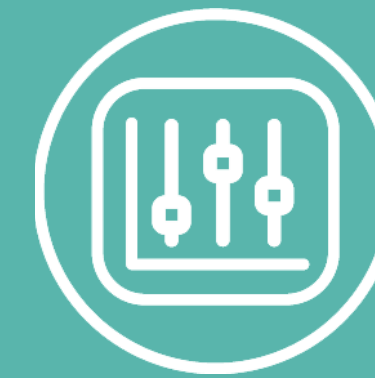
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Drive organic growth with the leading App Store Optimization platform.



Ad Intelligence

Develop winning User acquisition campaigns with crucial mobile advertising insights.



Usage Intelligence

Benchmark app usage, engagement, and demographics.



App Teardown

Evaluate which SDKs apps are using and measure SDK adoption across market segments.



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Contact Info:

sensortower.com

sales@sensortower.com

@sensortower

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