



Innovate to Win on The Next Level with Hybrid Genre Games

2021 Go Global Mobile Game New Insights





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Methodology and Definition

Data in this report are compiled from App Annie Intelligence

Terms

- Consumer spend is gross spend the sum of payments made before Apple or Google takes a fee. iOS App Store and Google Play share of consumer spend on apps varies, but was generally 30% in this report. Consumer spend includes paid to download and in-app purchases. They do not include revenue earned from in-app advertising.
- For download and consumer spend figures, the apps in this report are counted based on unified apps made by App Annie. In unified apps, similar versions of the same apps with different names and on different platforms are unified. Apps and publishers are reported under their parent company.
- Cross-genre affinity is the likelihood that the users of one genre will use a game in another genre in comparison to the general population's likelihood.
- Data ready as of June 30, 2021

Game Genres

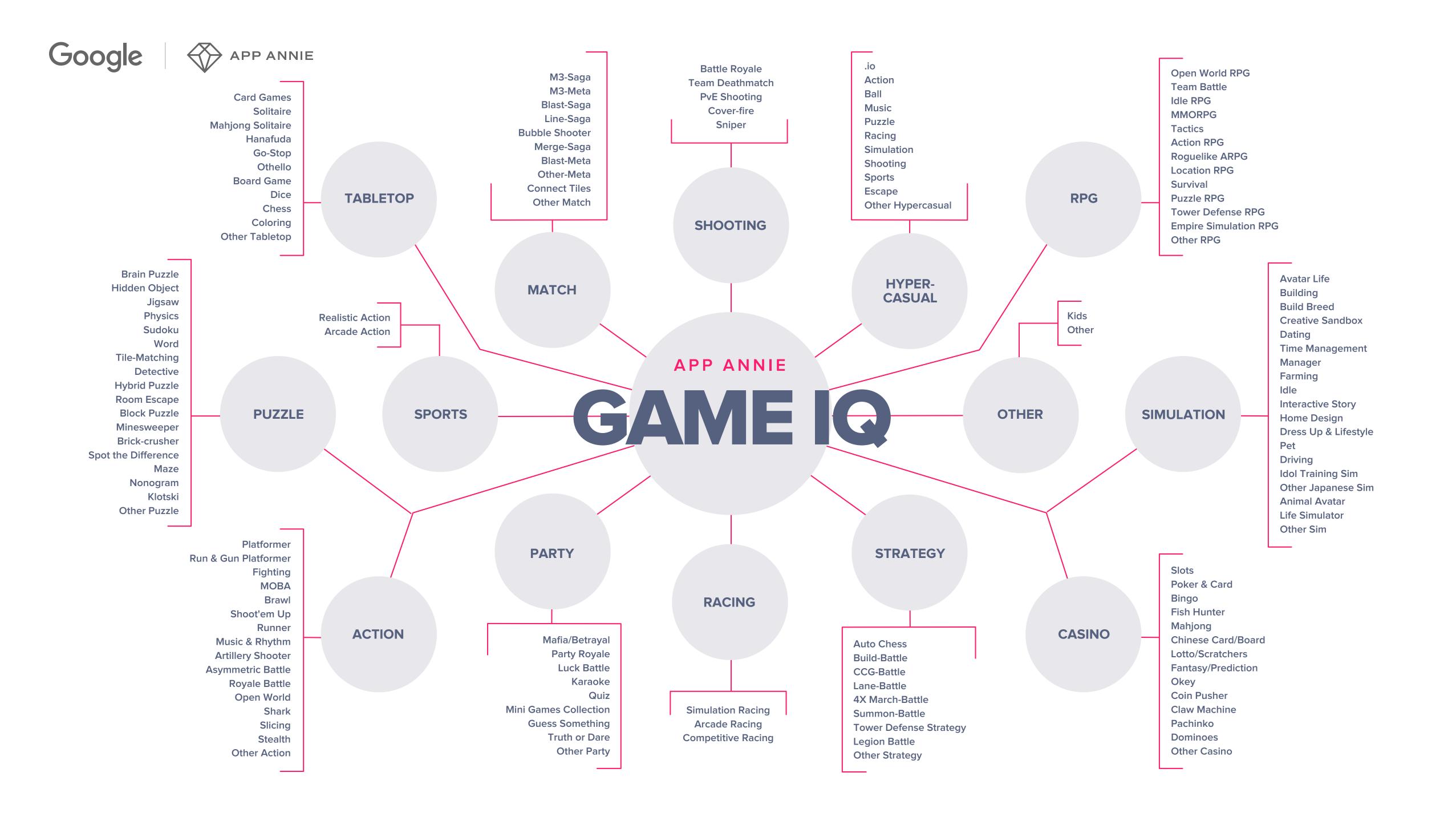
- Games are classified into genres based on App Annie's proprietary game classification taxonomy called Game IQ.
- App Annie's proprietary methodology and framework classifies mobile gaming apps by various attributes such as tuning, genre, subgenre and modifiers, in a scalable manner. This creates a unique classification of the game ecosystem.

Publisher Headquarter

- China headquartered publishers were defined as companies which are headquartered in Mainland China. They do not include overseas publishers or companies that are subsidiaries of companies which are headquartered in Mainland China.
- Overseas acquisitions did not change the headquarter country.

Countries and Regions

- Overseas means the markets excluding Mainland China, Hong Kong, Taiwan and Macau.
- North America: United States, Canada
- Latin America: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Falkland Islands, French Guiana, Guyana, Mexico, Paraguay, Peru, Suriname, Uruguay, Venezuela
- Middle East North Africa: Egypt, Israel, Kuwait, Lebanon, Morocco, Qatar, Saudi Arabia, Turkey
- Southeast Asia: Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam
- West Europe: Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom





Take Your Games to the Next Level

Over the years, Google has accompanied Chinese mobile games globalization from zero to hero.

In 2021, we are delighted to see Chinese mobile games reaching new heights in overseas markets. We at Google are grateful to have the opportunity to work with all of you game developers from creating to scaling the games. We look forward to cooperating with more industry partners in 2021 and continue the breakthroughs with our Chinese developers for the next chapter.



Hui Deng Director, Gaming, China Large Customer Sales



New Normal, New Opportunities

It has been a challenging period for everyone globally, trying to adapt to the "new normal." Games have evolved beyond just a form of entertainment and past-time to be a source of bonding, competition, education, relief, and health.

As a global company, App Annie seeks to play our part in this ever-changing landscape by identifying the most granular gaming opportunities and uncovering the best in-game mechanics that impact retention and monetization in every type of game. Together, let us bring the joy of gaming to everyone in the world.



Junde Yu

App Annie Vice President and
General Manager, Gaming



Mobile Gaming Continues to Level Up



Opportunities for Winners in all Kinds Genres



Growth Can Come in Many Forms





Mobile Gaming Continues to Level Up

- The industry stepped into the new era of growth:

 Downloads and time spent are coming down from their pandemic

 highs but settling into a healthy growth pattern.
- Chinese games reached new heights: Since the start of 2020, China HQ'd publishers launched 187 new games into the Top 2000 and grew 47% in consumer spend in H1 2021 to reach the leading mobile game market share position at 23%.
- Top-grossing markets are still expanding: Gamers in the top-grossing markets of the US, Germany, and the UK contributed the most to this growth as new areas of opportunity took shape in the markets of Chile and Egypt.







Opportunities for Winners in all Markets and Genres

- Top titles are key drivers of growth: The Top 10 grossing subgenres have remained unchanged since last year while new subgenres have leaped into top positions of downloads, signaling a possible shift in gamer preferences.
- Growth opportunities exist in all subgenres:
 Applying a scoring model based on the number of games,
 consumer spend growth, and total time spent can help identify
 opportunities with subgenres. We have categorized subgenres by
 their score into Score Leaders, Mature Middle, and Highly
 Competitive.

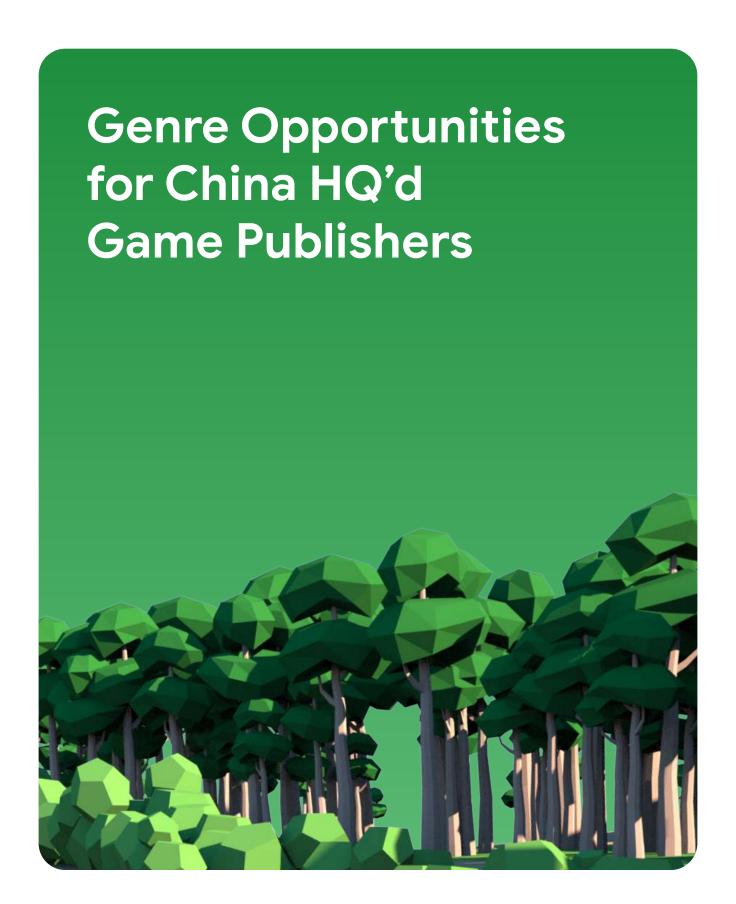


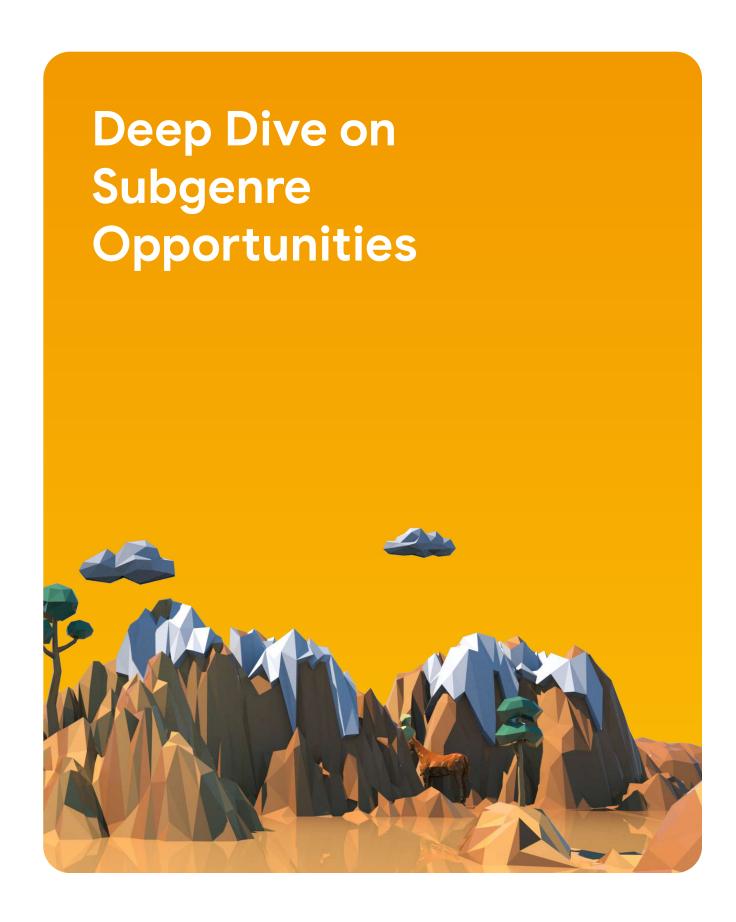
Growth Can Come in Many Forms

- Innovate and optimize features: Use current market trends and top-grossing themes and features to grow engagement and revenue.
- Breakthrough subgenre status quo barriers:
 Use hybridization to leverage the strengths of another subgenre to attract a more diverse player base, increase engagement and optimize monetization.

Contents









Chapter 1

Global Market Size & Growth Trends





Consumer Gaming Engagement Remains Strong as Pandemic Lockdowns Lift

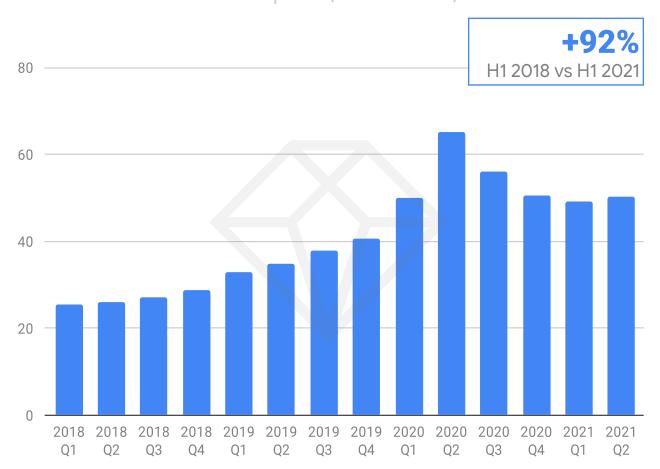
Overseas Mobile Game Consumer Spend

Consumer Spend (Billion USD)



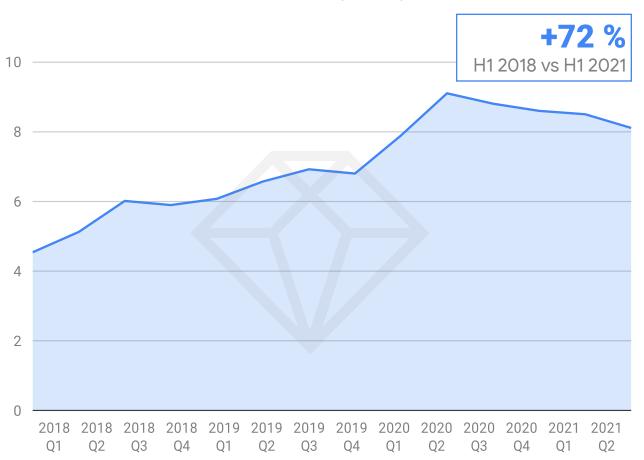
Overseas Mobile Game Time Spent

Time Spend (Billion Hours)



Overseas Mobile Game **Downloads**

Downloads (Billion)



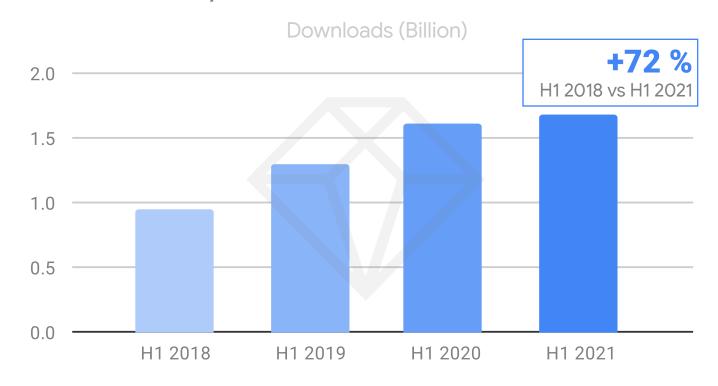




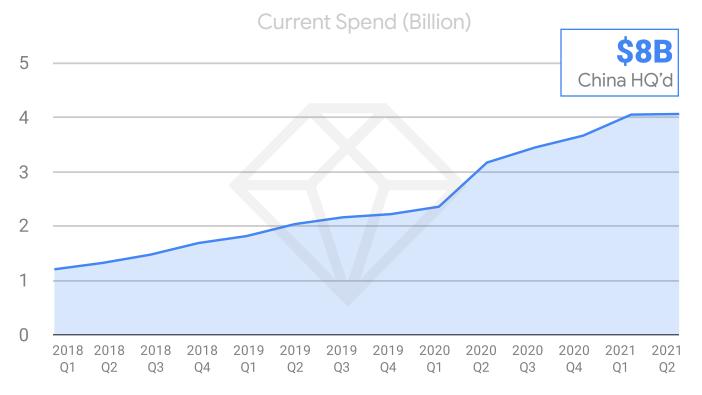
China Mobile Gaming Exports Reached New Highs

- Demand for mobile games remains strong as evidenced by China-HQ'd publishers' overseas downloads reaching 1.7B in H1 2021
- Gamers spent \$36B this year globally on mobile games of which \$8B was spent on China mobile game exports, 47% year-on-year growth

Downloads in Overseas Markets By China-HQ'd Publishers



Consumer Spend in Overseas Markets By China-HQ'd Publishers



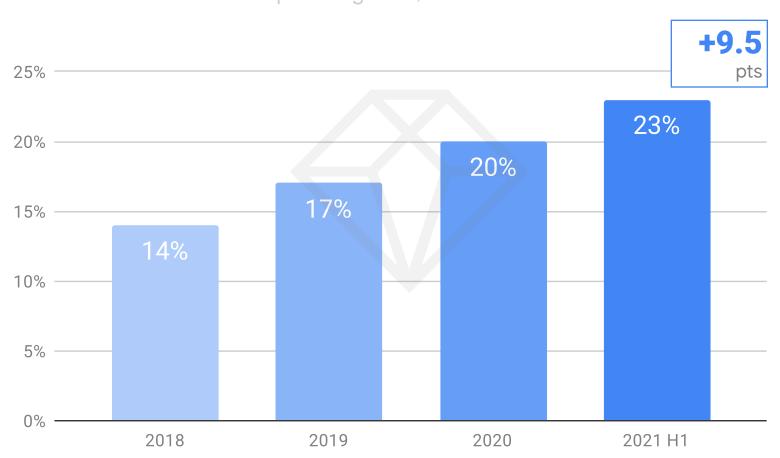


China Grows to Account for Nearly 25% of Global Consumer Spend on Mobile Games

- The market share of China mobile game exports in overseas consumer spend has grown steadily by an average rate of 3.2% year over year
- Since 2018, China's share of consumer spend on mobile games has grown 9.5 percentage points

Share of China HQ'd Consumer Spend in Overseas Gaming Markets

Top 2000 games, 2018-H1 2021







China Game Exports Continue to Increase in Number and Quality - Driving Steady Growth

- China's market share of overseas consumer spend grew by 3.6 percentage points year over year, establishing China as a leader
- Investments by China-HQ'd publishers in 187
 new game launches from January 2020 to H1
 2020 helped with this growth
- Ireland's growth among top games is primarily due to continued growth in established titles

Share of China-HQ'd Consumer Spend in Overseas Gaming Markets

Jverseas Garring Marke



Market Share YoY Percentage Point(pp)

vs H1 2020

China 3.6pp
United Kingdom -0.5pp
United States 0.3pp
Finland
Japan -3.7pp
Isreal -0.2pp
South Korea -0.6pp
Ireland 0.8pp

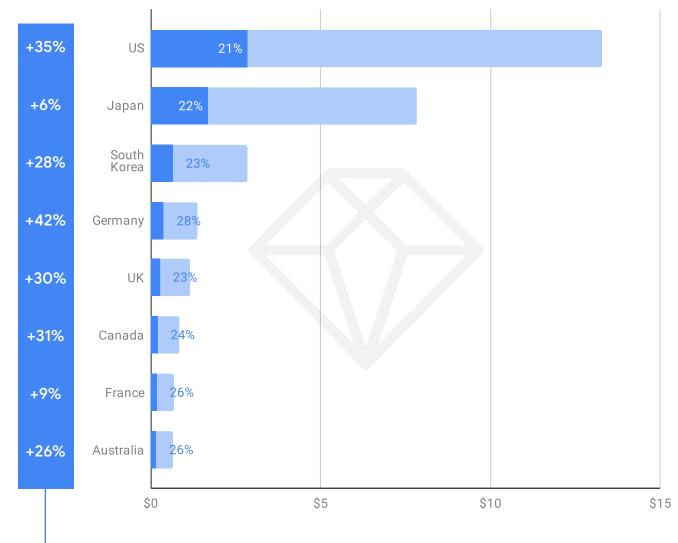


China Publishers Gain Market Share in Top **Grossing Markets**

- The market share of consumer spend by China-HQ'd publishers in Germany surged to 28% in H1 2021
- Slowest market share growth was in South Korea (15%) while consumer spend grew 28%.
- China HQ'd publishers saw strong YoY growth in consumer spend in other markets like Chile (+86%) and Egypt (+58%)

Share of China HQ'd Games in Key Markets for Overseas Consumer Spend

Top 2000 games, H1 2021, Billion USD





Chapter 2

Genre Opportunities for China – HQ'd Game Publishers





Strategy, Match and RPG Subgenres Remain among the Top-grossing Genres, while Hypercasual Genres Jump in Downloads Rankings for Overseas Spend

Top 10 Subgenres by Overseas Consumer Spend, Top 2000 Games, H1 2021

Rank in H1 2021	vs 2020	Subgenres
1	+1	4X March-Battle (Strategy)
2	-1	Team Battle (RPG)
3	=	Slots (Casino)
4	=	MMORPG (RPG)
5	+1	M3-Meta (Match)
6	+2	M3-Saga (Match)
7	=	Battle Royale (Shooting)
8	-3	Puzzle RPG (RPG)
9	+2	Creative Sandbox (Simulation)
10	-1	Simulation Sports (Sports)

Top 10 Subgenres by Overseas Downloads, Top 2000 Games, H1 2021

Rank in H1 2021	vs 2020	Subgenres
1	=	M3-Meta (Match)
2	=	Runner (Action)
3	+5	4X Match-Battle (RPG)
4	+1	Simulation Sports (Sports)
5	+1	Board Game (Tabletop)
6	+6	Creative Sandbox (Simulation)
7	-3	Battle Royale (Shooting)
8	+1	Team Deathmatch (Shooting)
9	+18	Music (Hypercasual)
10	+3	M3-Saga (Match)



Diverse Game Play Preferences across Select Markets are Reflected in the Top Subgenres

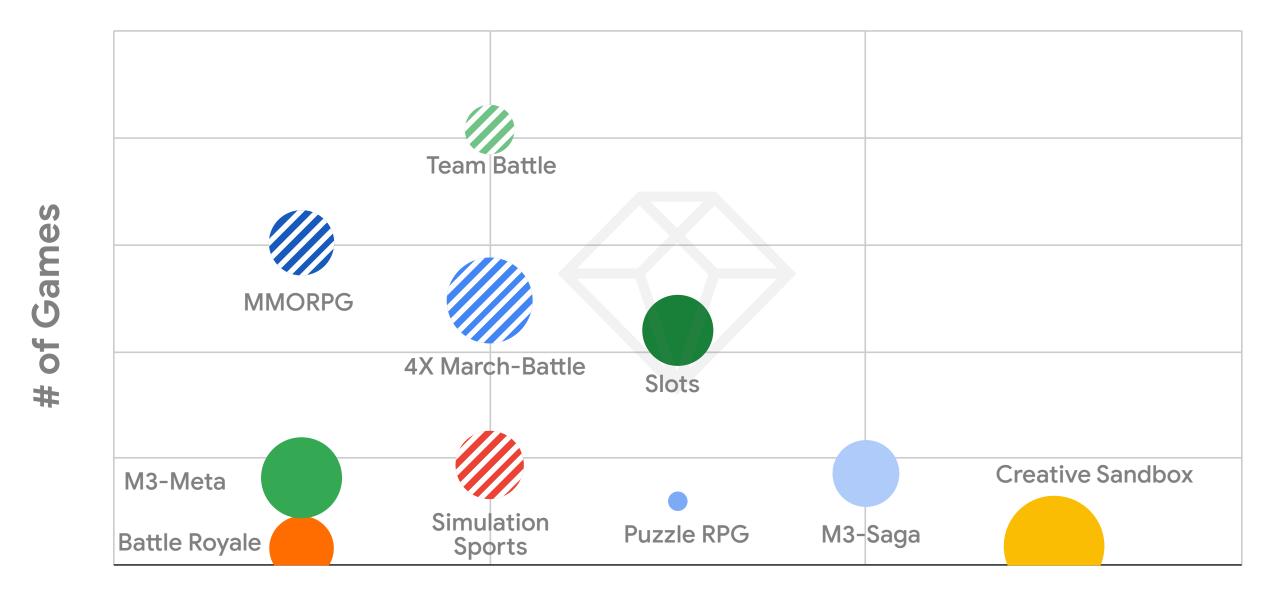
Top 3 Subgenres by Overseas Consumer Spend in Select Markets Top 2000 Games (H1 2021)

	US		Japan		Korea		Germany	
1	Slots	15%	Team Battle	21%	MMORPG	49%	4X March-Battle	19%
2	4X March-Battle	13%	Idol Training Sim	13%	Team Battle	11%	M3-Meta	9%
3	M3-Meta / Team Battle	7%	Puzzle RPG	10%	4X March-Battle	9%	Team Battle	7%
	UK		Indonesia		Brazil		Egypt	
1	4X March-Battle	17%	4X March-Battle	18%	Battle Royale	12%	4X March-Battle	28%
2	M3-Meta	9%	Battle Royale	11%	4X March-Battle	12%	Battle Royale	21%
3	M3-Saga	7%	MMORPG	7%	Luck Battle	8%	Simulation Sports	4%



Additional Opportunity to Expand Market Share Still Exists in Some Top Subgenres where Mature Titles Have Driven Growth

Count of Games in Subgenre x Average Age of Game Top 10 Subgenres by Overseas Consumer Spend, Top 2000 Games, H1 2021



Avg. Age of Game (Years)

- Bubble Size= YoY% Consumer

 Spend

 (H1 2021 vs H1 2020)
- Less Concentrated Subgenres
 (Share of total consumer spend
 of top 5 games in the subgenre
 is lower than 70%)



Identifying Opportunities for Growth

We analyzed the Top 2000 games published before May 2020 and scored the subgenres using a combination of:

- Number of games in the subgenre and their average ranking by consumer spend
- YoY consumer spend growth (H1 2021 vs H1 2020)
- H1 2021 total time representing the user base of the subgenre

Grouping subgenres by their score into three categories based on their score may help identify specific areas of opportunity for new game launches or growth in existing games.



May require more initial resources to break into these subgenres but adding their features to your game may help improve monetization.



Consistent monetization and higher average ranking of these subgenres; lower risk for iterative innovations to break away from the competition.



Creative performance marketing and continuous gameplay optimization may spur growth in these unique subgenres.





Subgenre Opportunity Analysis



These subgenres have fewer titles with higher average rankings. They have seen significant growth in consumer spend across larger than average user bases (avg total time)

Examples:

- Luck Battle
- Merge-Saga
- Brawl



These subgenres are more densely populated with average ranking games.
Growth in consumer spend and user bases (avg total time) were modest or below average compared to the other top 30 subgenres.

Examples:

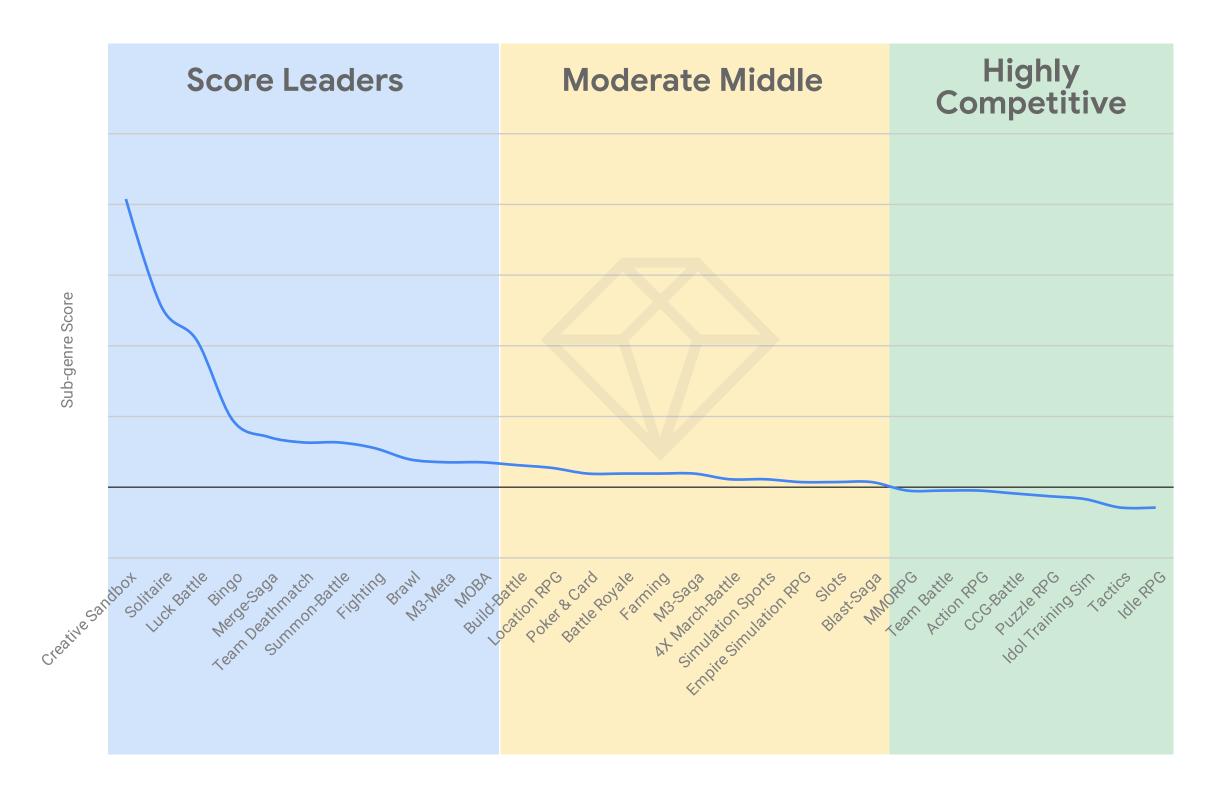
- M3-Meta
- 4X March-Battle
- Simulation Sports



While some of these subgenres have high total consumer spend, subgenres in this category have seen below average growth rates in consumer spend and shrinking user bases (avg total time) compared to lower ranking titles.

Examples:

- Idol Training Sim
- Team Battle
- Puzzle RPG



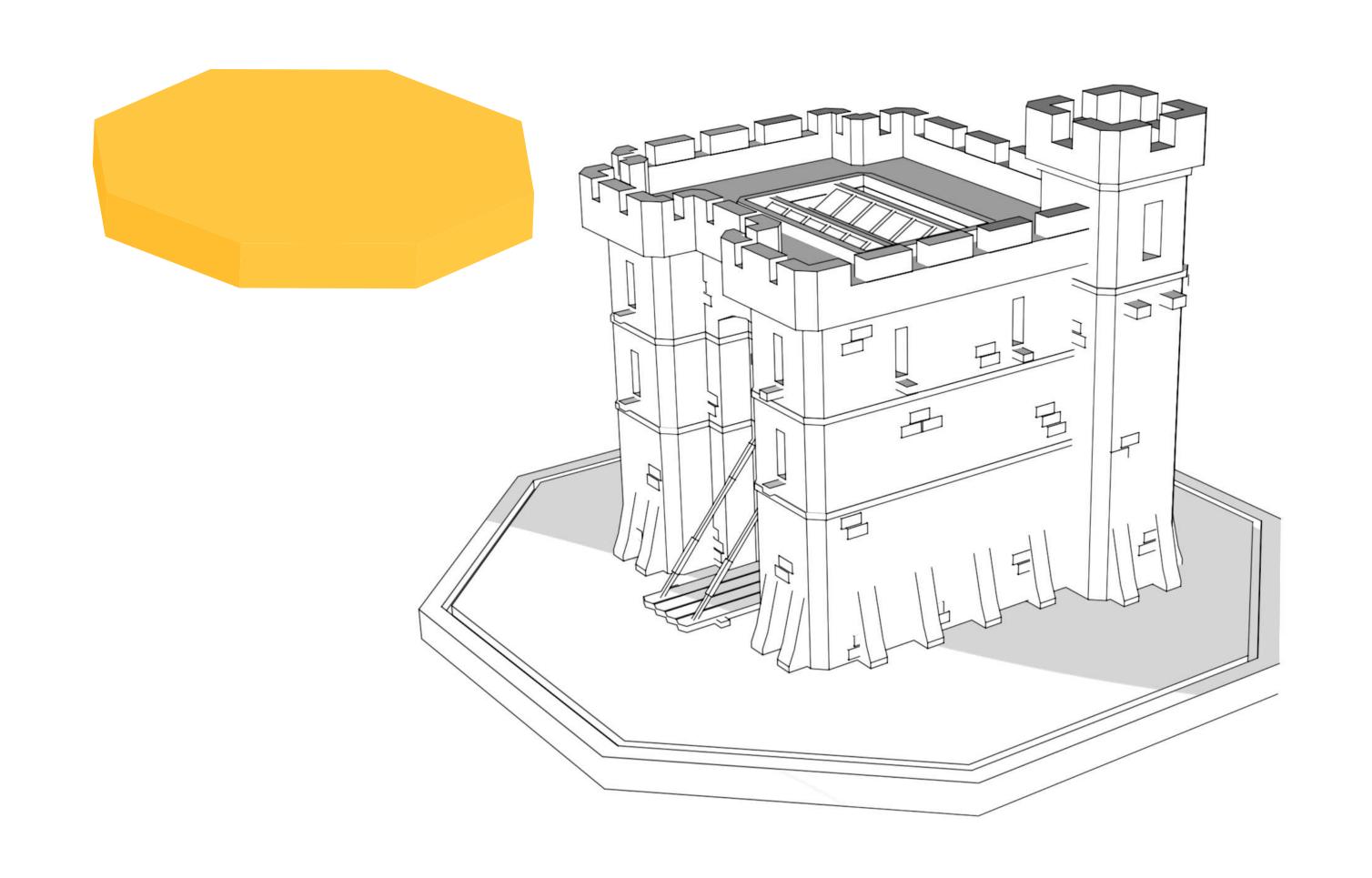




Chapter 3

Deep Dive on Subgenre Opportunities





Score Leaders

Luck Battle Merge Saga





Player engages with a chance-based game system to battle/loot from other real players

Top 5 Games by Overseas Consumer Spend in H1 2021

Rank	Game Name
1	Coin Master
2	Pirate Kings
3	Island King
4	Dice Dreams
5	Piggy GO



Luck Battle | Market Overview

Focused on social and community, Luck Battle is one of the top – grossing genres where growth predominately comes from a few mature titles

+19%

Consumer Spend growth worldwide 2021 H1 vs 2020 H1

Gamers from US, Germany, and UK spent the most -28%

Downloads growth worldwide 2021 H1 vs 2020 H1

Most downloaded in Brazil, US, and Malaysia

+23%

Total Time Spent growth worldwide 2021 H1 vs 2020 H1

Brazil, US, and France were the top markets for time spent

Luck Battle | Market Opportunities

Broaden appeal of this high-retention subgenre by incorporating farming gameplay and multiplayer elements

Grow with Fan Favorites

Attention getters:

Themes - Fantasy, War, and Asian Culture - Nijigen

Engagement and monetization drivers:

- External Friend Invites (Social)
- Consumables (Monetization)
- Tournaments (Social)
- Any Competitive Multiplayer (Social)
- Events (Gameplay Features)

Expand with High Affinity Subgenres

Luck Battle players also enjoy playing games from these subgenres:

Cross Subgenre Usage

4X March-Battle	13%
Farming	13%
Cloto	400/

Slots 12%





Games with a focus on merging similar items to create more powerful items as well as utilizing sagabased progression

Top 5 Games by Overseas Consumer Spend in H1 2021

Rank	Game Name
1	Merge Dragons
2	EverMerge
3	Merge Magic
4	Mergical
5	Merge Gardens



Merge Saga | Market Overview

Maturing category leaders are being challenged by newer games offering fresh combinations that are capturing player spend and attention

+21%

Consumer Spend growth worldwide 2021 H1 vs 2020 H1

US, UK, and Germany gamers spent the most

-26%

Downloads growth worldwide 2021 H1 vs 2020 H1

Most downloaded in the US, Russia, and Brazil

+11%

Total Time Spent growth worldwide 2021 H1 vs 2020 H1

US, Germany, and India were the top markets by time spent



Merge Saga | Market Opportunities

Iterate on the merge core genre with casual genre combinations or fantasy themes to reach optimal ecosystem mix

Grow with Fan Favorites

Attention getters:

Themes - Fantasy, Lifestyle - Farming

Engagement and monetization drivers:

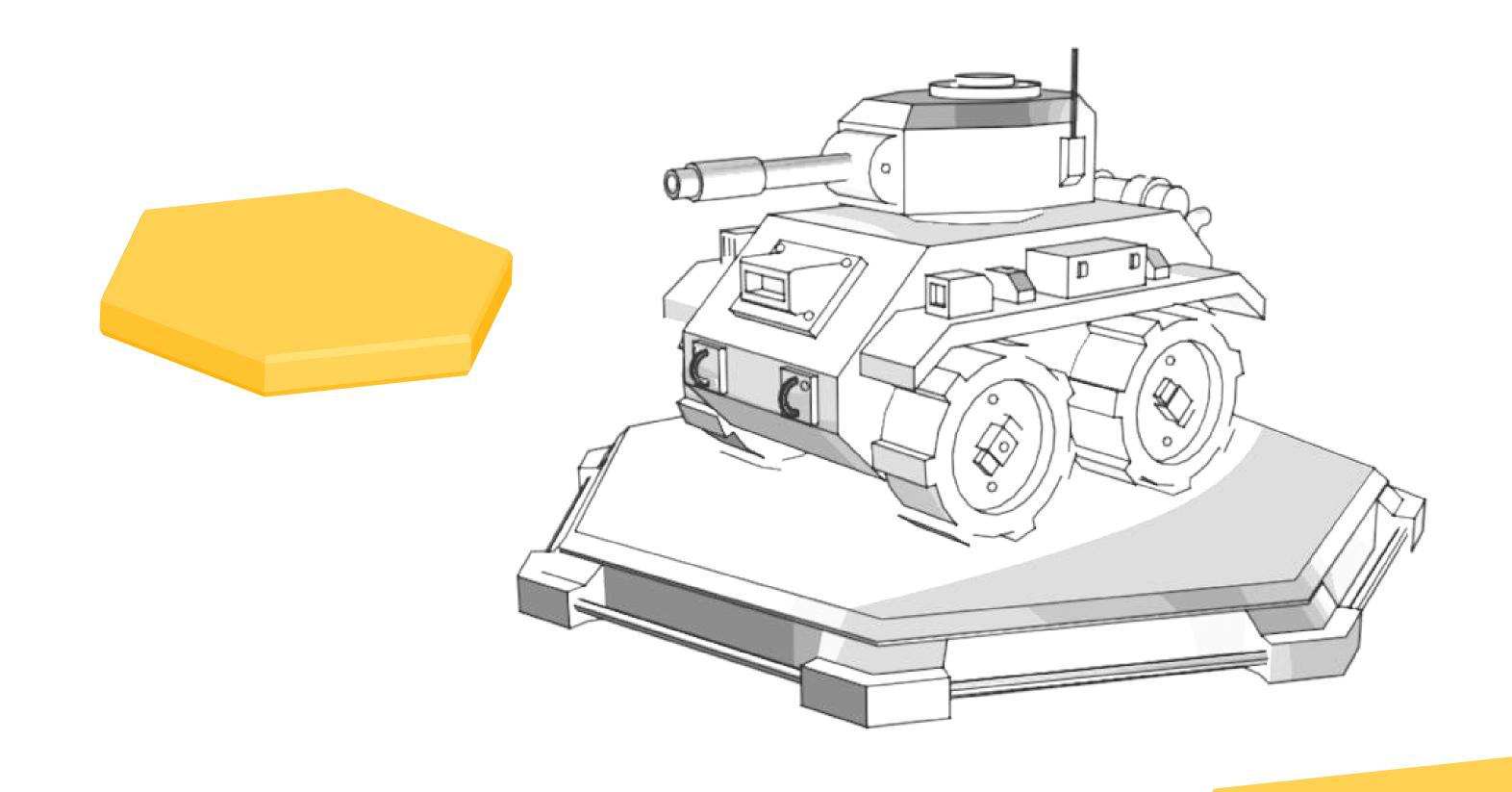
- Advertising (monetization)
- Events (gameplay features)
- Power Ups (monetization)
- Gacha / Loot Boxes (monetization)
- Consumables (monetization)

Expand with High Affinity Subgenres

Merge Saga players also enjoy playing games from these subgenres:

Cross Subgenre Usage

Idle	18%
Coloring	15%
Farming	13%



Moderate Middle

4X March Battle M3-meta



4X March Battle

Games where the player grows a city and builds an army that attacks through timed marches on a map

Top 5 Games by Overseas Consumer Spend in H1 2021

Rank	Game Name
1	State of Survival
2	Rise of Kingdoms
3	Lords Mobile
4	Top War: Battle Game
5	Mafia City



4X March-Battle | Market Overview

Dominant Strategy genre where growth is mainly driven by existing titles scaling

+51%

Consumer Spend growth worldwide 2021 H1 vs 2020 H1

Consumers from US, Japan, and Germany spent the most +15%

Downloads growth worldwide 2021 H1 vs 2020 H1

Most downloaded in the US, India, and Brazil

+31%

Total Time Spent growth worldwide 2021 H1 vs 2020 H1

US, Japan, and Indonesia
were the top markets
by time spent



4X March-Battle | Market Opportunities

Diversify appeal and widen monetization with IP along with simplified casual and core hybridization

Grow with Fan Favorites

Attention getters:

- Themes War, Fantasy, and Western Historical MedievalEngagement and monetization drivers:
- Guilds/Clans (Social)
- Chat (Social)
- Events (Gameplay Features)
- Consumables (Monetization)
- Any Competitive Multiplayer (Social)

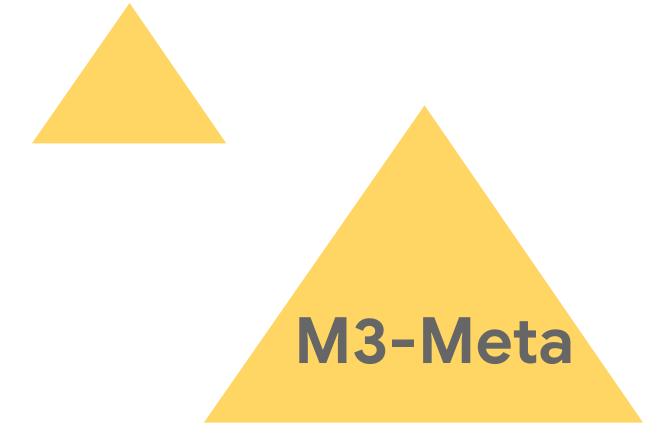
Expand with High Affinity Subgenres

4X March-Battle players also enjoy playing games from these subgenres:

Cross Subgenre Usage

Idle	18%
Team Battle	17%
Shooting	11%





Match 3 swapping games with a focus on some form of building in its meta game

Top 5 Games by Overseas Consumer Spend in H1 2021

Rank	Game Name
1	Homescapes
2	Gardenscapes - New Acres
3	Project Makeover
4	Fishdom: Deep Dive
5	Matchington Mansion

M3-Meta | Market Overview

Loyal player appetite for different kinds of meta concepts have helped drive consumer spend growth in this crowded casual category

+42%

Consumer Spend growth worldwide 2021 H1 vs 2020 H1

Consumers from the US, Japan, and Germany spent the most -30%

Downloads growth worldwide 2021 H1 vs 2020 H1

Most downloaded in India, US, and Brazil; with Brazil seeing the largest growth -2%

Total Time Spent growth worldwide 2021 H1 vs 2020 H1

US, Russia, and Japan were the top markets; with US and Russia continuing to grow



M3-Meta | Market Opportunities

Match genre with maturing player expectations, new meta concepts, and simplified core genre features focused on motivations of the player

Grow with Fan Favorites

Attention getters:

Themes -Home Design, Female Oriented, and
 Western Historical - Medieval

Engagement and monetization drivers:

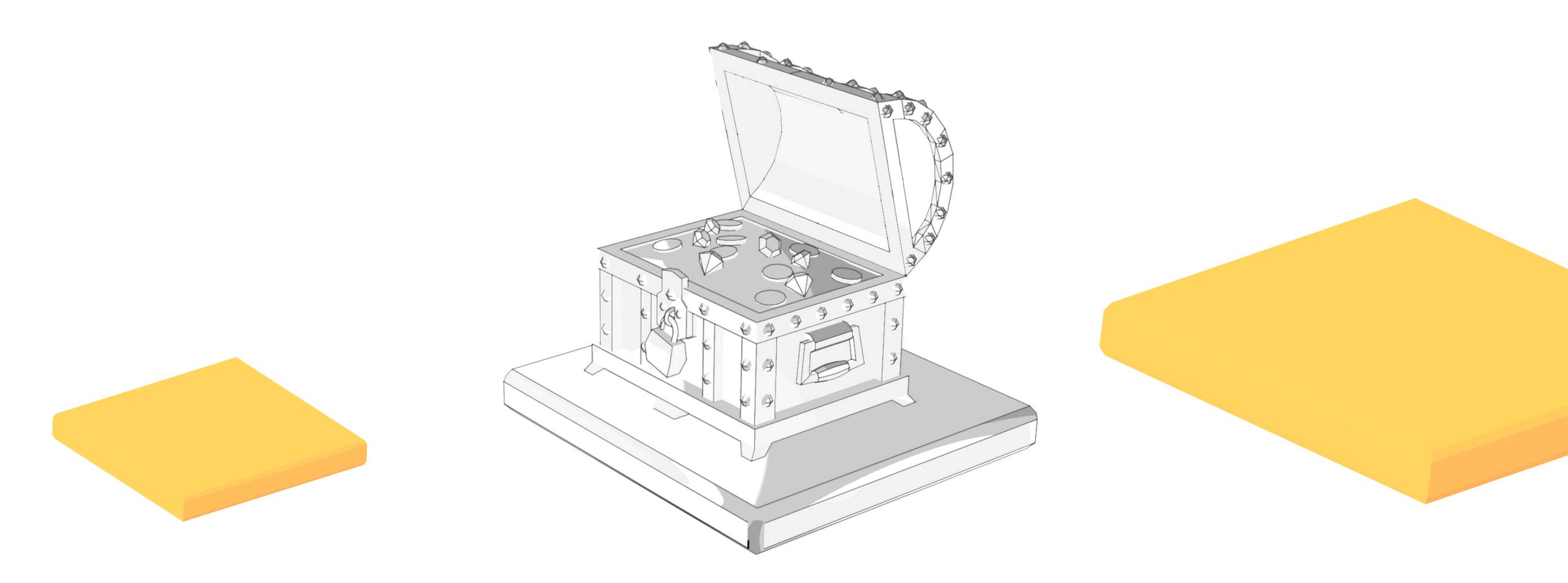
- Power Ups (monetization)
- Events (Gameplay Features)
- Leaderboards (Social)
- Consumables (monetization)
- Social Assists (Social)

Expand with High Affinity Subgenres

M3-Meta players also enjoy playing games from these subgenres:

Cross Subgenre Usage

Coloring	11%
Farming	10%
Solitaire	10%



High Competition

Idol training Puzzle RPG





Games in which players train and level up Japanese-style idols against different types of activities or professions

Top 5 Games by Overseas Consumer Spend in H1 2021

Rank	Game Name
1	Uma Musume Pretty Derby
2	Ensemble Stars Music
3	Project Sekai Colorful Stage! feat. Hatsune Miku
4	THE IDOLM@STER Starlight Stage
5	BanG Dream



Idol Training | Market Overview

Breakout growth driven by a few new title launches from Japan and China – HQ'd publishers

+129%

+127%

+59%

Consumer Spend growth worldwide 2021 H1 vs 2020 H1

Downloads growth worldwide 2021 H1 vs 2020 H1 Total Time Spent growth worldwide 2021 H1 vs 2020 H1

Japan, Korea and US gamers spent the most

Most downloaded in Japan, Korea, and US

Japan, Korea, and Indonesia were the top markets for time spent



Gacha and Loot Boxes catapult newly launched titles into revenue leader statuses while social features that connect VIPs increase retention and engagement

Grow with Fan Favorites

Attention getters:

Themes - Idol Raising, Asian Culture - Nijigen,
 and Sports - Other Sport

Engagement and monetization drivers:

- Daily Login Rewards (gameplay features)
- Consumables (monetization)
- Events (gameplay features)
- Gacha / Loot Boxes (monetization)
- Achievements (gameplay features)

Expand with High Affinity Subgenres

Idol Training players also enjoy playing games from these subgenres:

Cross Subgenre Usage

Dating	12%
Japanese Sim	12%
Party	11%





RPG games that utilize a puzzle system as the primary combat mechanism

Top 5 Games by Overseas Consumer Spend in H1 2021

Rank	Game Name
1	Monster Strike
2	Puzzle & Dragons
3	Empires & Puzzles
4	Best Fiends
5	YO-KAI WATCH Wibble Wobble

Puzzle RPG | Market Overview

User acquisition challenges due to new user privacy policies may be impacting growth overall but pockets of it can be found in the subgenre's biggest market, Japan, as well as in the US and Germany

-12%

Consumer Spend growth worldwide 2021 H1 vs 2020 H1

Gamers from Japan, US, and Germany spent the most, with Germany seeing 17% growth -27%

Downloads growth worldwide 2021 H1 vs 2020 H1

Most downloaded in Japan, US, and Russia; downloads have grown significantly in Egypt and Philippines -3%

Total Time Spent growth worldwide 2021 H1 vs 2020 H1

Japan, Russia, and US were the top markets by time spend, with Russia continuing to grow



Puzzle RPG | Market Opportunities

Nijigen themes are the next opportunity attracting gamers, while for creative design consider incorporating some hardcore game elements into consideration, e.g. Team Battle and 4X March-Battle.

Grow with Fan Favorites

Attention getters:

- Themes Fantasy, War, and Asian Culture NijigenEngagement and monetization drivers:
- Consumables (monetization)
- Events (gameplay features)
- Gacha / Loot Boxes (monetization)
- IAPs Starter Pack (monetization)
- External Friend Invites (Social)

Expand with High Affinity Subgenres

Puzzle RPG players also enjoy playing games from these subgenres:

Cross Subgenre Usage

4X March-Battle	20%

Location RPG12%

Summon Battle





Strategy

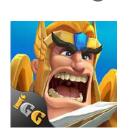
4X Match-Battle



State of Survival



Rise of Kingdoms



Lords Mobile



Top War: Battle Game



Mafia City

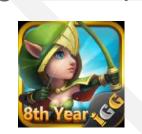
Build-Battle



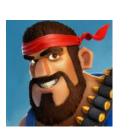
Clash of Clans



Forge of Empires



Castle Clash



Boom Beach



Ark of War

Summon-Battle



Clash Royale



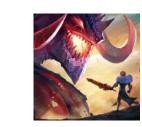
The Battle Cats



Mighty Party



Castle & Dragon

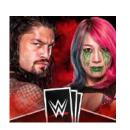


Art of Conquest

CCG-Battle



Yu-Gi-Oh! Duel Links



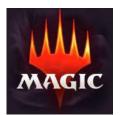
WWE SuperCard



Hearthstone: Heroes of Warcraft



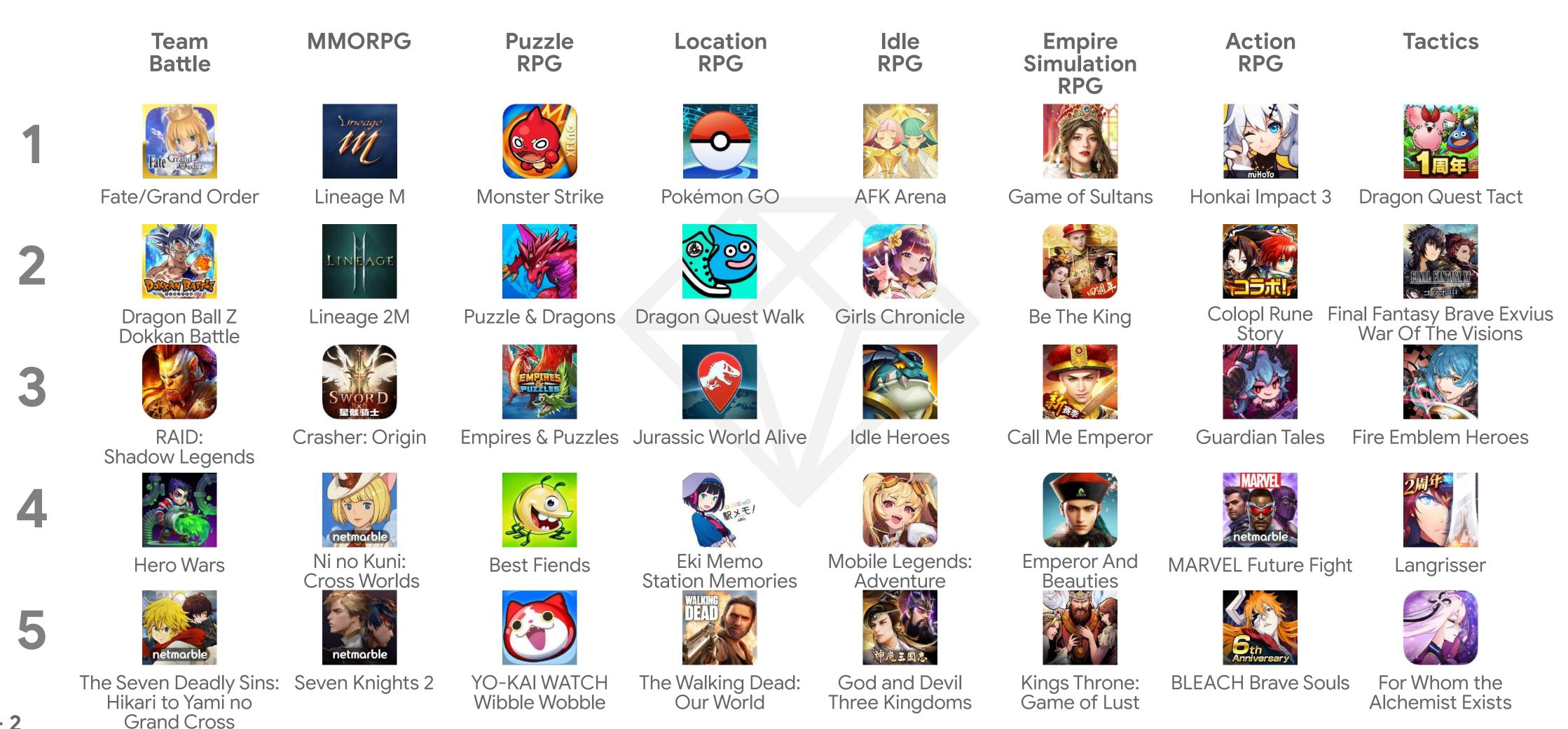
Shadowverse



Magic: The Gathering Arena



RPG







Match

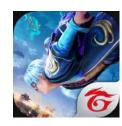
Merge-Saga

Battle Royale

Shooting



PUBG MOBILE



Free Fire



Knives Out

Bullet Echo



Creative Destruction

Team **Deathmatch**



Call of Duty: Mobile



War Robots



World of Tanks Blitz

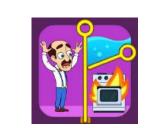


War Machines: 3D Multiplayer Tank Arena



Standoff 2

M3-Meta



Homescapes



Gardenscapes -New Acres



Project Makeover



Fishdom: Deep Dive



Matchington Mansion



M3-Saga

Candy Crush Saga



Candy Crush Soda Saga



Farm Heroes Saga



Clockmaker



PokoPoko

Blast-Saga



Toon Blast



Toy Blast



Angry Birds Dream Blast



Pet Rescue Saga



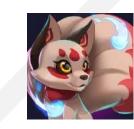
Sugar Blast



Merge Dragons



EverMerge



Merge Magic



Mergical



Merge Gardens









Simulation

Idol Training Sim

Action

MOBA

Creative Sandbox



ROBLOX



Uma Musume Pretty Derby

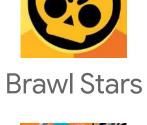
Ensemble Stars Music



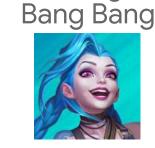
Farming

Township

Hay Day



Brawl



Mobile Legends:

League of Legends: Wild Rift ONE PIECE Bounty Rush



Arena of Valor



Fighting

Marvel Contest of Champions

MORTAL KOMBAT X



Minecraft Pocket Edition

Growtopia



Project Sekai Colorful Stage! feat. Hatsune Miku



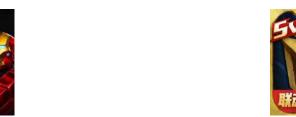
Klondike Adventures

Family Island



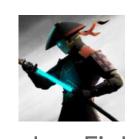
#Compass

SMASH LEGENDS



Heroes Evolved

Onmyoji Arena



Shadow Fight 3



WorldBox

Blockman Go



BanG Dream

THE IDOLM@STER Starlight Stage



Marvel Realm of Champions

Injustice: Gods Among Us





Casino

Party

Sports

Tabletop

Poker & Card

Slots

Bingo

Luck Battle

Simulation Sports

Solitaire



World Series of Poker

Slotomania



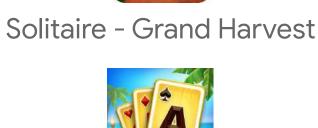
BINGO Blitz



Coin Master



eFootball PES 2020



Solitaire TriPeaks



Zynga Poker



Jackpot Party Casino



Bingo Story

Bingo Bash



Pirate Kings

Island King



Golf Clash



Solitaire Cruise TriPeaks Game



Pokerist Texas Poker

Poker by Neowiz



Cash Frenzy

DoubleDown Casino

SLOTS



Bingo Party



Dice Dreams

Piggy GO



8 Ball Pool



Fash: Fish Gishing Clame 2020



Pyramid Solitaire Saga



Solitaire TriPeaks Journey



Playshoo Texas Poker



Cashman Casino



Bingo Pop





