LIQUID&GRIT

PUZZLE REPORT

Competitive Research and Actionable Product Recommendations

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AUGUST

2020

REVENUE DRIVER

Product data, research, and recommendations for revenue-driving releases

EVENT STORE

Event Shop in *Angry Birds 2*

REVENUE ANALYSIS

Revenue was +6% and downloads were -9% 10Do10D after the launch of the Event Shop alongside The Summer Party Adventure mission event in *Angry Birds 2*.

Angry Birds 2

10Do10D = 10 days over 10 days
Graph data is iOS U.S. only.

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FEATURE TEARDOWN

An event store lets players spend event currency to purchase rewards.

Details

- During The Summer Party Adventure mission event, players earn event coins for completing missions, daily challenges, and the Tower of Fortune mini-game (1 and video).
- Players use coins in an event store to purchase custom hats, extra lives, Tower of Fortune tickets, and a leveling currency (2, 3, and 4).
- Coins expire when the event ends.

Additional Information

- See the Event Shop and The Summer Party Adventure Libraries for more images and videos.
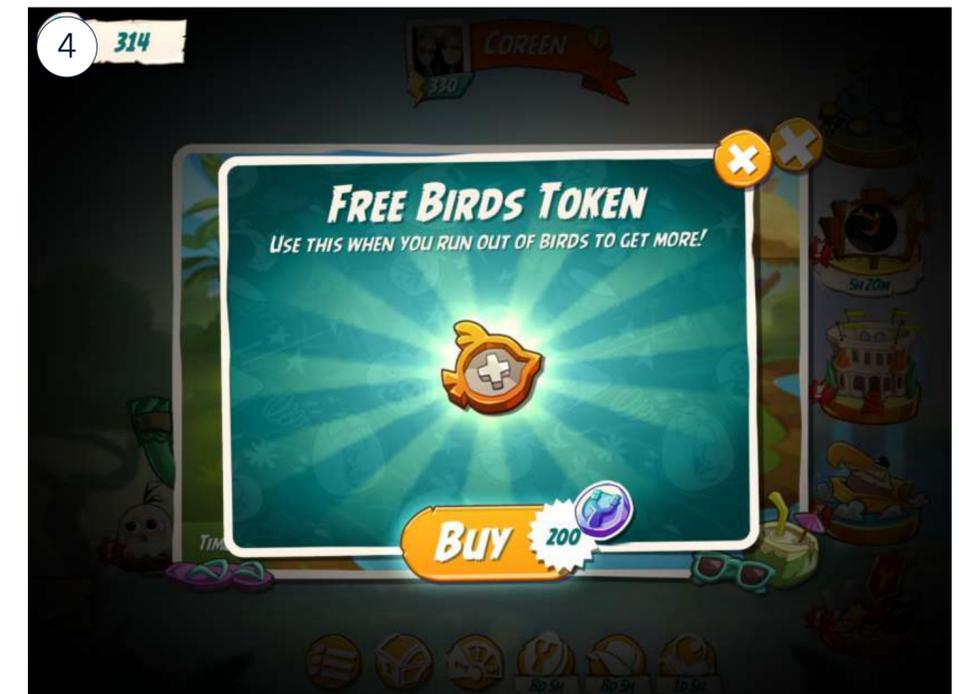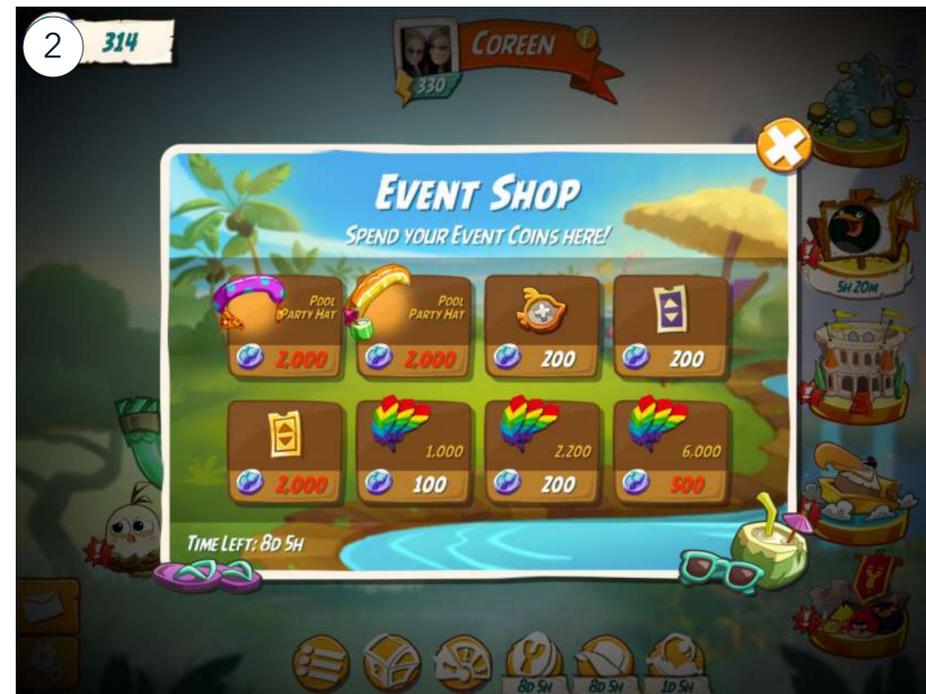
PRODUCT INSIGHTS

Expiring currency may deter high-value players.

Angry Birds 2's event coins expire at the end of each event, but research suggests that expiration may not be the best way to drive user behavior.

A study of loyalty programs found that point expiration decreases engagement from the highest-spending users. While less active users can push to reach reward thresholds before points expire, whales are often already maxed out and have little room to increase their activity, potentially leading to frustration as unredeemed points are wasted. And because of their close identification with the brand, these dedicated players are also the most likely to react negatively to restrictions on loyalty programs.[1]

> *Instead, keep high-value players engaged by carrying event currency over to subsequent events or converting it into primary currency with a mini-game.*

Events that maintain players' progress across multiple iterations have helped increase revenue in casino apps: *Bingo Party*'s Card Album, *Bingo Blitz*'s Euro Bites, and *Lotsa Slots*' Mission Blitz saw revenue grow +45% 2Mo2M, +23% WoW, and +18% 50Do50D, respectively (1).

Frequent redemption increases engagement.

According to research on credit card reward points, reward redemptions are the most important factor driving credit card usage, while expiration only has a limited impact. Users increase credit card purchases up to one week before an anticipated redemption and continue to make more purchases for three weeks or more after redeeming.[2]

The authors of this study recommend offering multiple reward tiers so that users can redeem frequently. Consider also designing event stores with many low-cost redemption options to make sure that rewards are always on players' minds.

Event stores have contributed to revenue growth in other genres, too. In RPG, *Star Trek Fleet Command*'s Crucible of War, which saw revenue grow +88% 3Do3D, offered separate stores for individual and club missions (2). Casino app *Quick Hit Slots* included a store in the Santa's Workshop event that contributed to a +7% 20Do20D revenue increase.

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[1] The effect of loyalty program expiration policy on consumer behavior, p. 8 & 11

[2] Reward redemption effects in a loyalty program when customers choose how much and when to redeem, p. 347–351

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TRENDS

Investment trends for event and feature releases

Tracked Puzzle Apps: *Angry Birds 2*, *Best Fiends*, *Bubble Witch 3 Saga*, *Candy Crush Jelly Saga*, *Candy Crush Saga*, *Candy Crush Soda Saga*, *Cookie Jam*, *Disney Emoji Blitz*, *Farm Heroes Saga*, *Fishdom*, *Gardenscapes*, *Gummy Drop!*, *Home Design Makeover*, *Homescapes*, *June's Journey*, *Lily's Garden*, *Lost Island: Blast Adventure*, *Matchington Mansion*, *Panda Pop!*, *Pet Rescue Saga*, *Solitaire Grand Harvest*, *Solitaire TriPeaks*, *Toon Blast*, *Toy Blast*, and *Wizard of Oz Magic Match*

PUZZLE FAVORS MISSIONS, CUSTOM DESIGN, AND COLLECTIONS

Collections were the third most frequently released event type during the past three months, making up 13% of all event releases among tracked puzzle apps.

Puzzle Event Releases (Past 3 Months)
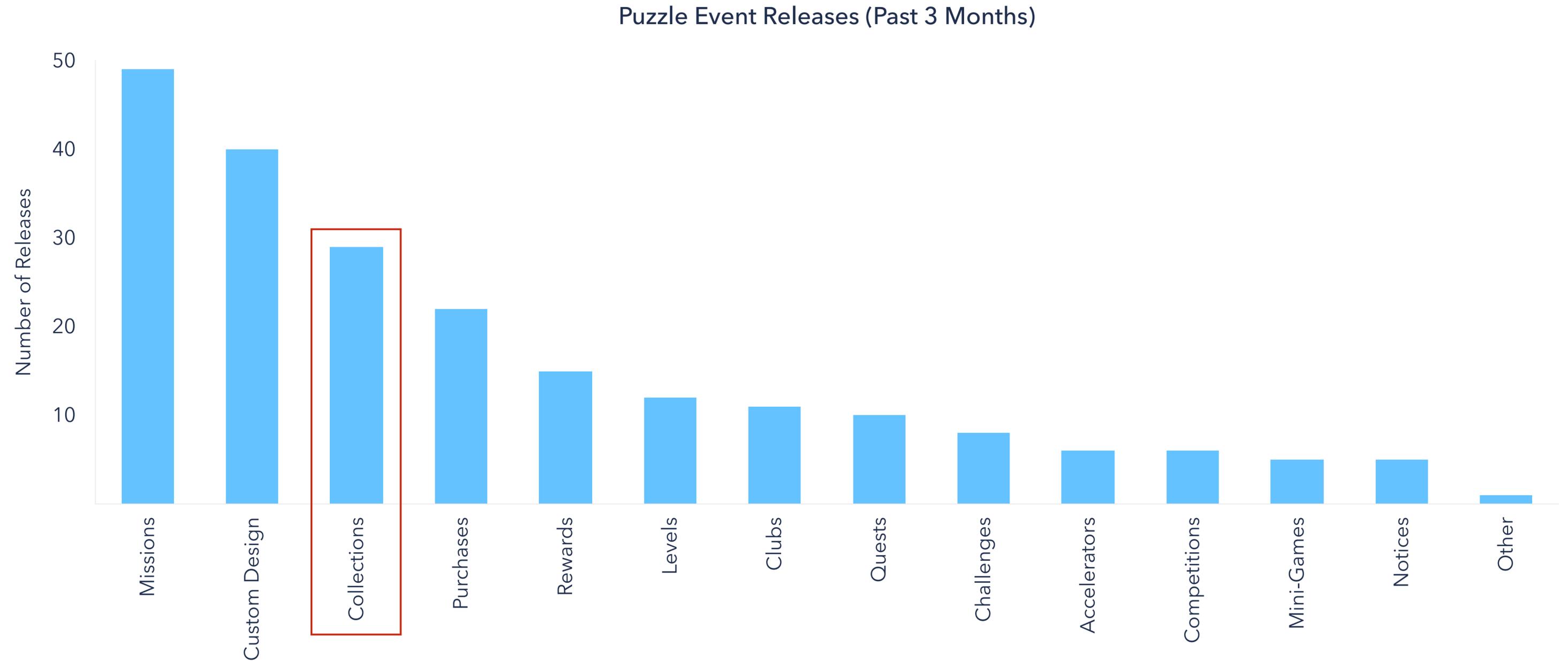
COLLECTION EVENTS STAY CONSISTENT

Collection event releases have remained relatively flat over the past year and a half. Besides Q1'19, no quarter varied from the quarterly average by more than +/-15%.

Collection Event Investment

Number of Releases

| | Q1'19 | Q2'19 | Q3'19 | Q4'19 | Q1'20 | Q2'20 |

Average
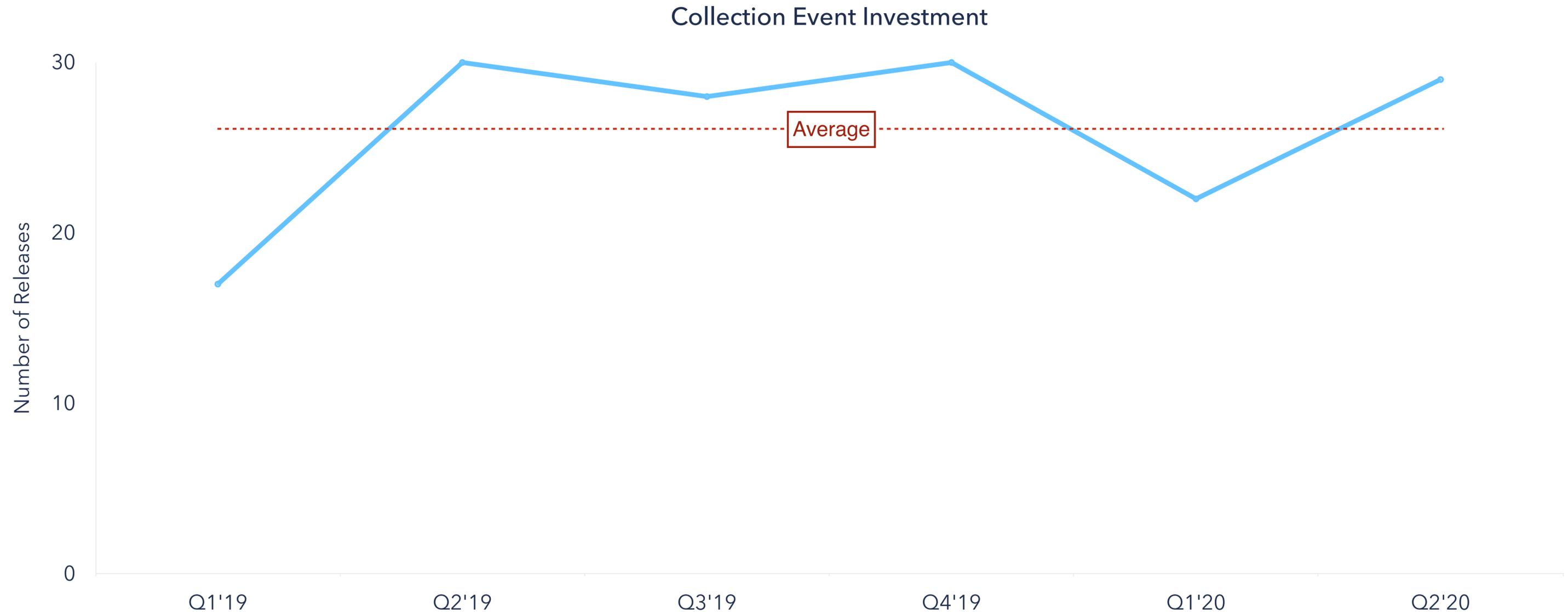
THREE APPS RELEASE MOST COLLECTION EVENTS

During the past year, *Disney Emoji Blitz*, *Cookie Jam*, and *Best Fiends* accounted for two thirds of all collection event releases by tracked puzzle apps. *Disney Emoji Blitz* alone released more than one third.

Collection Events by App (Past 12 Months)

Number of Releases
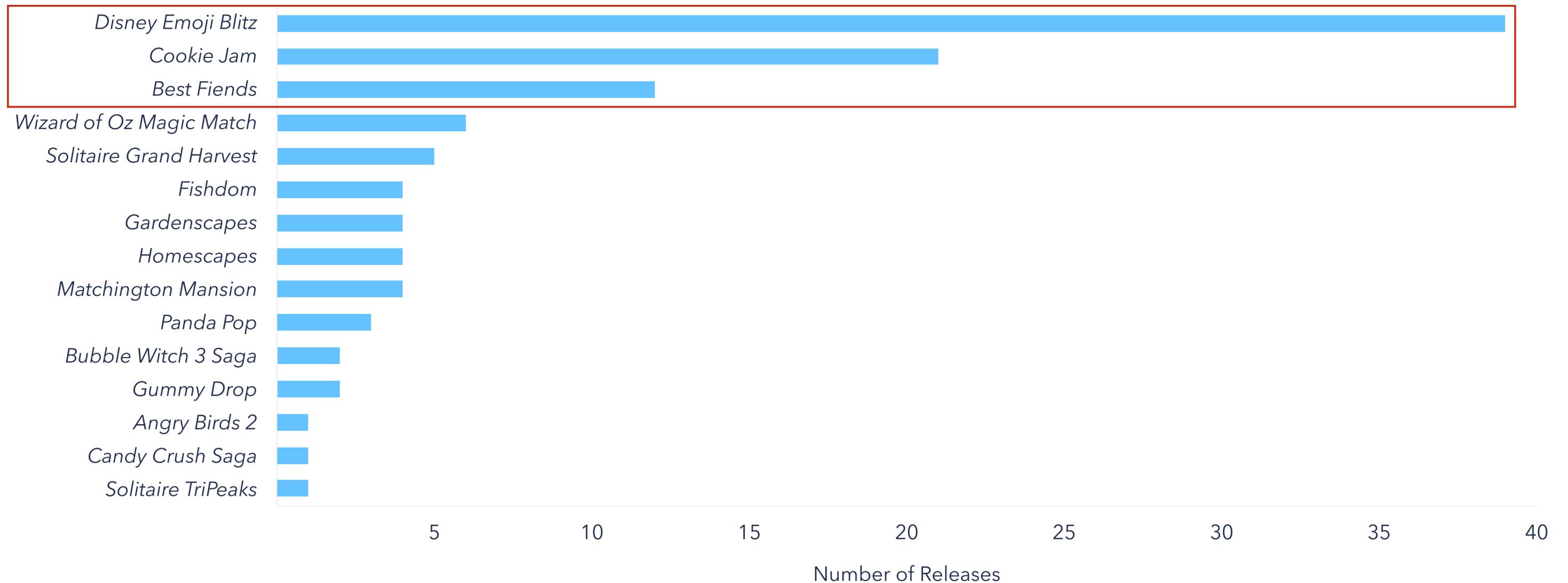
ALMOST HALF OF APPS HAVE EVENT STORES

Just under 50% of tracked puzzle apps include some form of event store. *Angry Birds 2* leads the pack with four event stores.

App	Event Store
Angry Birds 2	Bonus Shop Hat Shop Mighty Eagle's Shop Event Shop
Cookie Jam	Blooming Prize Shop (1) Pet Costumes
Fishdom	Collection Store Vouchers (2)
Bubble Witch 3 Saga	Home
Farm Heroes Saga	Farm Club (3)
Gardenscapes	Decor
Gummy Drop	Trade Center
June's Journey	Detective Lounge
Matchington Mansion	Comics Studio
Pet Rescue Saga	Silver Shop
Solitaire TriPeaks	Club Shop (4)
Wizard of Oz Magic Match	Emerald City Bazaar

CASINO RELEASES THE HIGHEST PROPORTION OF COLLECTIONS

In the past year, collection events made up 24% of casino event releases, 15% of puzzle releases, and 10% of RPG releases among tracked apps.

Collection Events by Genre

● Casino ● Puzzle ● RPG
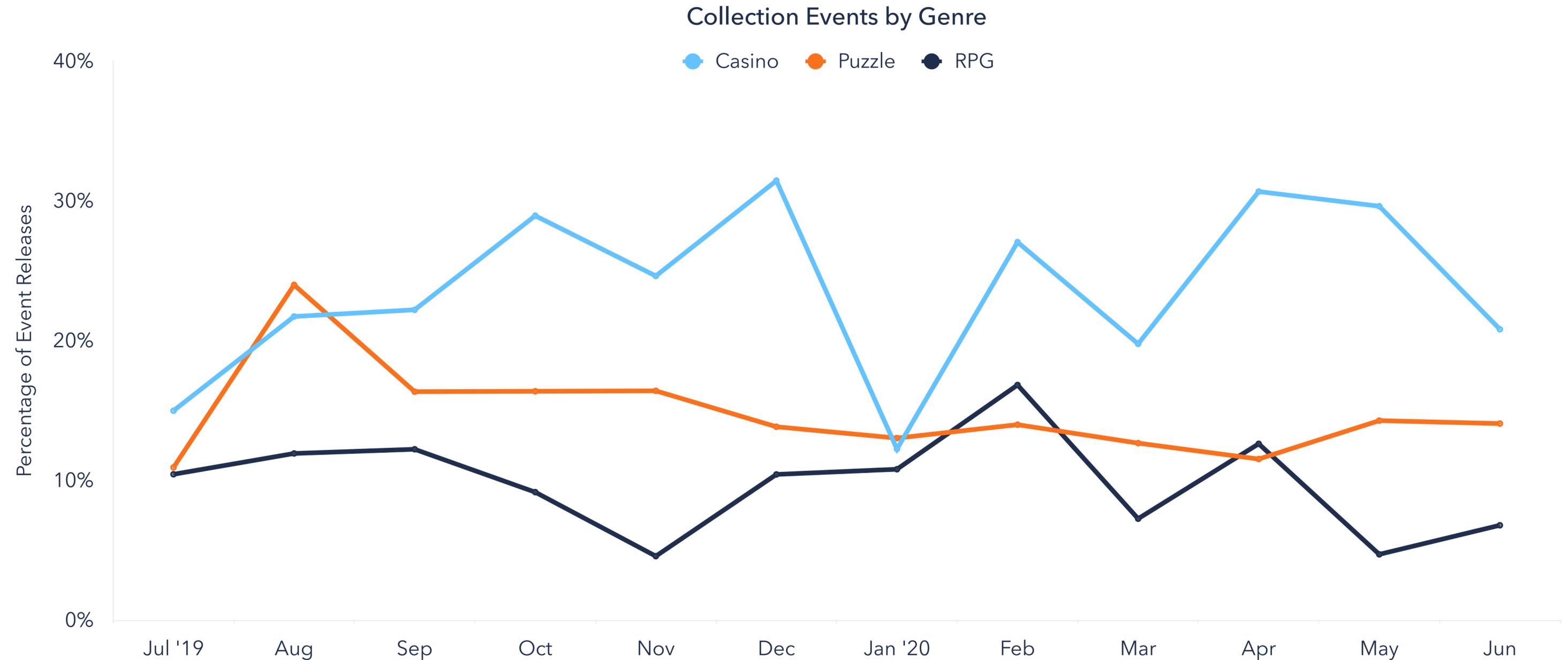
REVENUE MOVEMENT

Revenue changes within apps and across genres

REVENUE NORMALIZES ACROSS GENRES

Following substantial growth due to social distancing measures, U.S. revenue has returned to pre-COVID levels in puzzle and RPG. Casino revenue has also declined but remains relatively high.

Monthly Revenue by Genre

● Puzzle ● Casino ● RPG
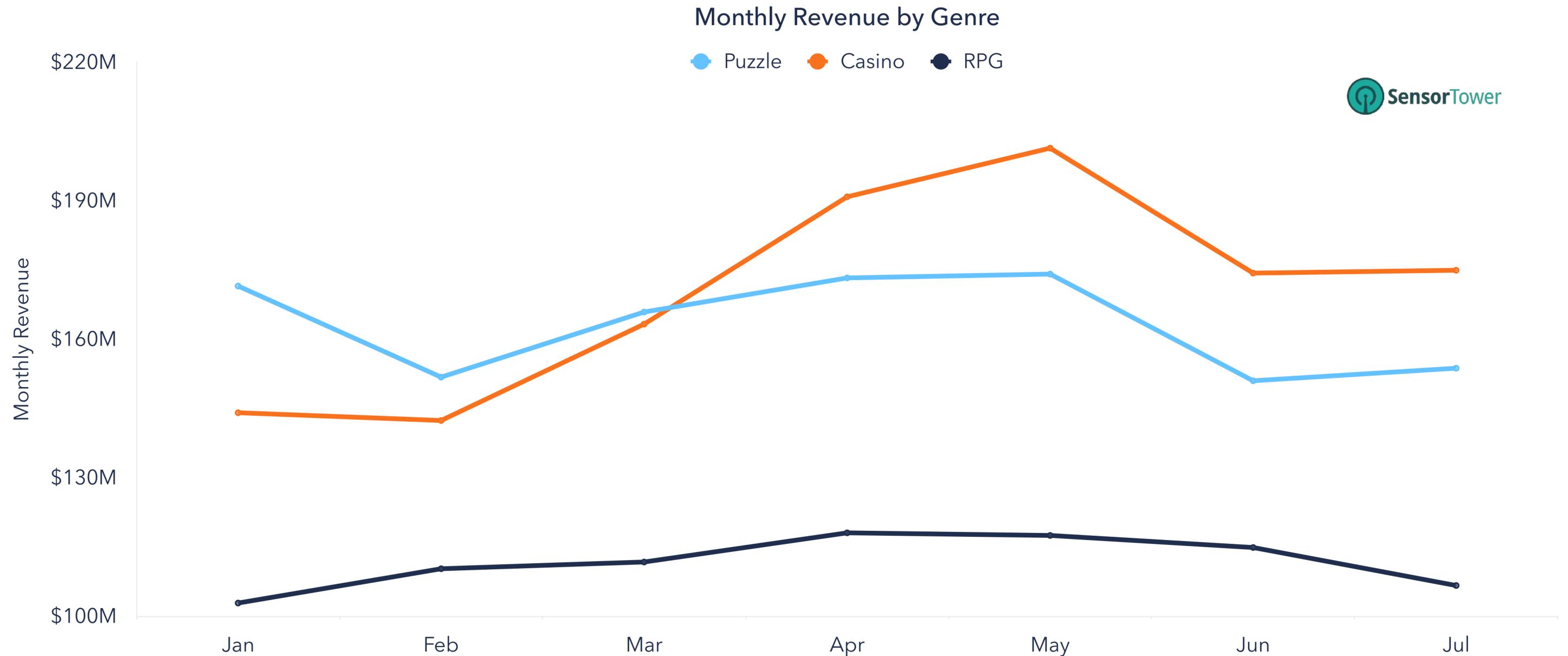
Graph data is all platforms, U.S. only.

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LEVEL DESIGN

New characters, obstacles, boosts, and level requirements

NEW LEVEL DESIGNS I

Free Birds Token – *Angry Birds 2*
- Tokens grant three additional birds (1).
- Tokens can be earned from levels or purchased for event coins.

Abstract Freddie – *Best Fiends*
- This alternate version of Freddie is unlocked by completing the Freddie's Art Studio event.
- Abstract Freddie adds a permanent +50 attack boost.
- Eddie and Abstract Freddie can be purchased together for 250 gold bars (2).

Botanist Beebert – *Best Fiends*
- This alternate version of Beebert is unlocked by completing the Botanical Gardens event.
- Botanist Beebert adds a permanent +50 attack boost.
- Botanist Beebert can be purchased for 100 gold bars (3).

Maple – *Best Fiends*
- This new fiend can be purchased for 200 gold bars (4).
- Maple destroys 10 blocks in 2 columns.
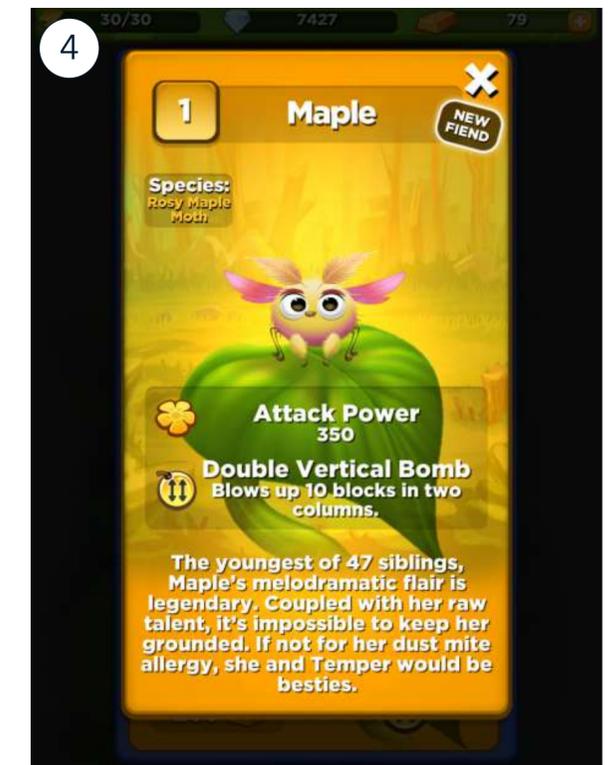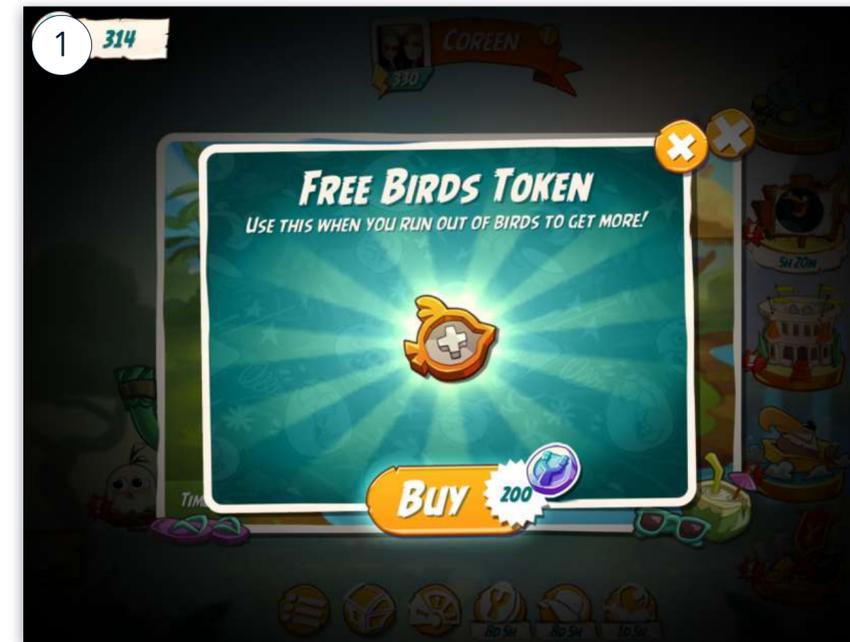
NEW LEVEL DESIGNS II

Pitmaster Newt – *Best Fiends*
- This alternate version of Newt is unlocked by completing the Beach BBQ event.
- Pitmaster Newt adds a permanent +50 attack boost.
- Pitmaster Newt can be purchased for 100 gold bars (1).

Licorice Curl – *Candy Crush Saga*
- Licorice walls block matches.
- Adjacent matches or boosts remove licorice strands (2 and video).
- Removing all strands clears the licorice wall.

Whirlpools – *Fishdom*
- Each whirlpool contains one piece.
- Pieces move between whirlpools each turn (3).

Ivy – *Homescapes*
- Ivy prevents pieces from moving and spreads to adjacent pieces if not cleared.
- Matches with ivy-covered pieces or adjacent boosts clear ivy (4).
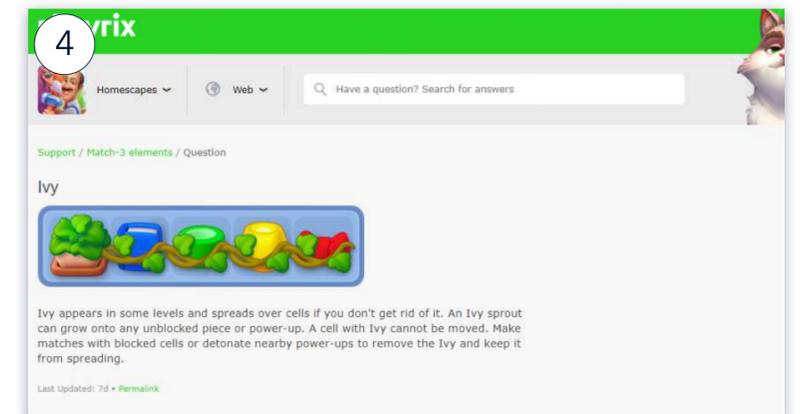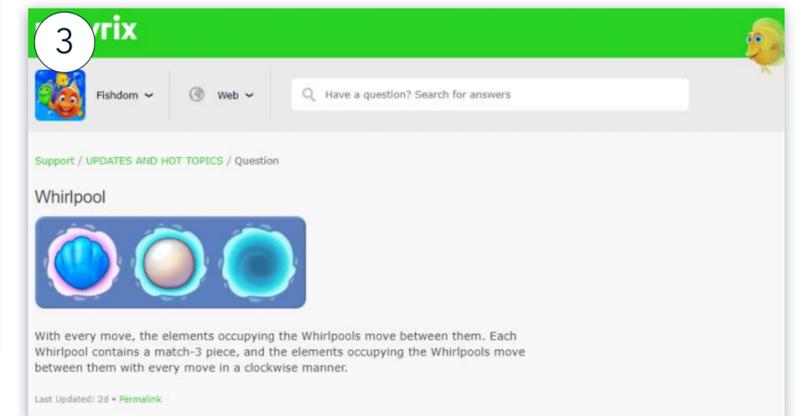
MARKET WATCH

New apps and notable releases from established competitors

SOFT-LAUNCH APPS

Switchcraft by Wooga

App Details
- Players earn gems from match-3 levels.
- Level goals include clearing paths for water and making matches with specific pieces to free butterflies.
- Gems are used to fill out a character's diary and advance a story.
- Players choose how to progress the story and complete occasional interactive elements (1 and video).
- Some levels award decorations for a dorm room (2).

Launch Information
- Soft-launched 6/26/20 in the Philippines
- Average daily revenue (26 days): $2
- Average daily downloads (26 days): 87
- View *Switchcraft* on the App Store

> Match-3 puzzle apps and interactive drama sims are the first and fifth most popular genres with female gamers according to a 2017 study by Quantic Foundry.[3]
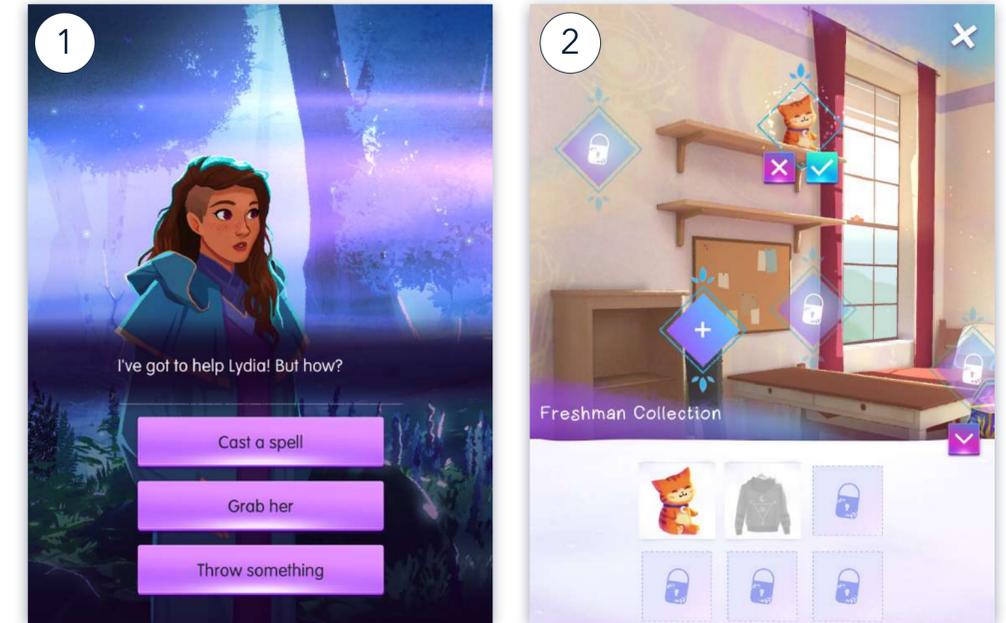
Crooked Pines by MyTona

App Details
- Match-3 levels award stars that players use to complete custom design tasks (3).
- Completed tasks advance a story with frequent opportunities for player choice (4).
- Checkpoints, chapters, and daily bonuses award stickers.
- Stickers fill a meter for a talisman.
- Talismans trigger timed boosts.

Launch Information
- Soft-launched 4/23/20 in the UK, Australia, Canada, and New Zealand
- Average daily revenue (90 days): $55
- Average daily downloads (90 days): 227
- View *Crooked Pines* on the App Store
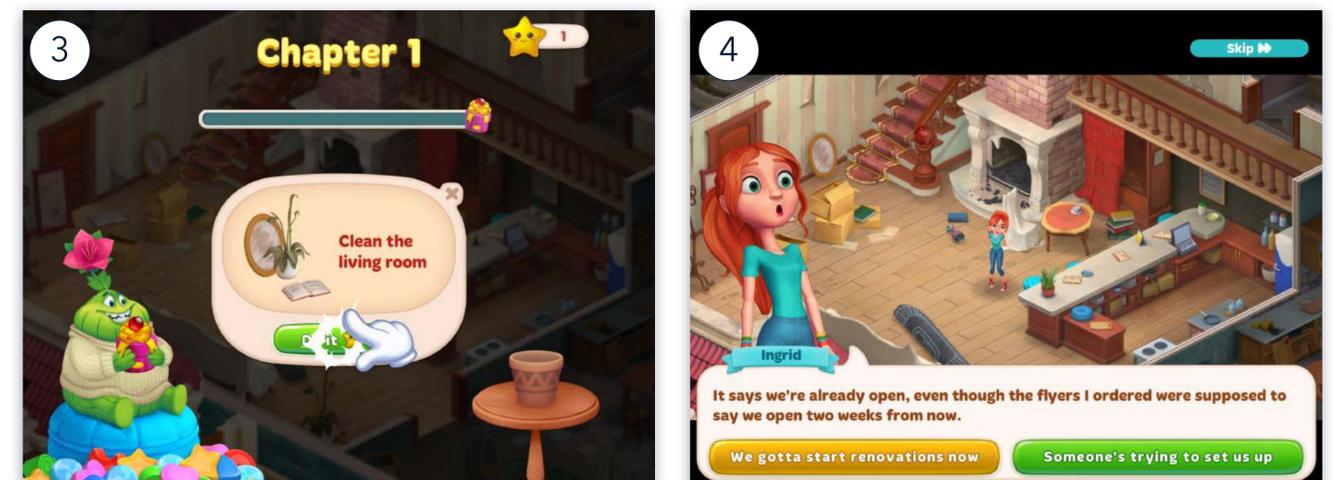
[3] Beyond 50/50: Breaking Down The Percentage of Female Gamers by Genre

BREAKOUT APP

Sweet Escapes: Build A Bakery by Redemption Games

App Details

- Collapse-3 levels award stars for custom design tasks (1).
- Completed custom design tasks advance a story (2).
- Players earn decorations for inviting friends (3).
- Daily login rewards culminate in a larger reward on the seventh consecutive day (4).
- Clubs allow players to exchange lives, chat, and compete in events (5).

Launch Information

- Released worldwide on 7/19/19
- 35th highest-grossing puzzle app as of 7/1/20
- Average daily revenue (U.S., 90 days): $53,141
- Average daily downloads (U.S., 90 days): 5,789
- View Sweet Escapes: Build A Bakery on the App Store

NOTABLE RELEASES I

App	Library	Description
Candy Crush Soda Saga	[Kimmy's Arcade](#) mini-game feature	• Players choose one of three boosts ([1](#)). • Boosts clear pieces and cover tiles with jam ([video](#)). • Covering all tiles with jam using a single boost completes the level and awards a prize. • Players can leave with their current rewards or continue playing up to seven levels per day. • Failing a level forfeits all rewards unless players purchase additional attempts.
	[Soda Summer Vacation](#) challenge event	• Players complete challenges to earn tickets that fill a prize meter ([2](#)). • Challenges increase in difficulty and award more tickets with each completion ([video](#)).
Gardenscapes	[Lucky Bet](#) challenge event	• Players can bet 500 coins to double prizes for beating the next level ([3](#) and [video](#)). • Failing the level forfeits the bet.
Lily's Garden	[Families](#) club feature	• Players can create or join clubs. • Club members can chat, send each other lives, and invite Facebook friends ([4](#)).

NOTABLE RELEASES II

App	Library	Description
Solitaire Grand Harvest	Firework Rush competition event	• Unused cards from completed levels award fireworks (1 and video). • Players compete on a leaderboard for the most fireworks.
Solitaire TriPeaks	Tiki's Key Quest collection event	• Players choose from three key collection challenges with different rewards (2). • Solitaire levels award keys.
Wizard Of Oz Magic Match	Oz Storybooks mission feature	• Players complete levels and win streaks to earn points. • Points are used to color pages in a storybook (3 and video). • Players can spend currency to complete pages if they do not have enough points.
	Piggy Bank bank feature	• Stars earned from levels add gold to a piggy bank (video). • Players can purchase the bank once it reaches 40 gold (4).
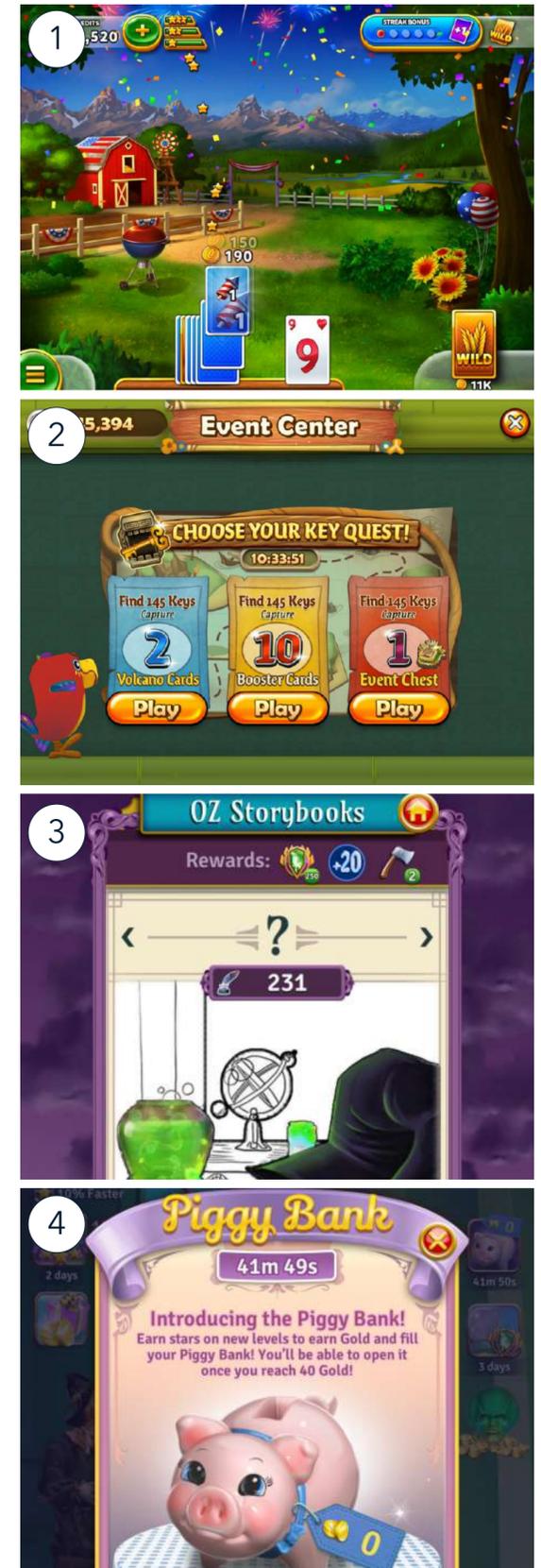
Quickly review all features and events
Filter the Library Tool by month and year to see all new releases.

APPENDIX

L&G Puzzle Personas

Survey data from 1,513 puzzle players produced five personas with distinct motivations: Gamer Gary, Escapist Emily, Trainer Tracy, Challenger Chris, and Casual Carol.

Table: Player personas by demographics, monetization, engagement, and motivational buckets

Input	Gamer Gary	Escapist Emily	Trainer Tracy	Challenger Chris	Casual Carol
Demographics					
Size (N)	24%	15%	22%	18%	21%
Female (%)	53%	68%	73%	59%	66%
Age (mean)	35	36	42	40	34
Monetization					
Propensity to spend across all platforms	15.0	7.0	4.8	7.0	4.3
Propensity to spend on F2P games	1.8	1.1	0.7	0.6	0.7
Engagement					
Weekly play hours	6.6	7.4	7.6	7.8	6.7
Puzzle motivation	3.1	2.9	2.6	2.7	2.4
Motivational Buckets					
Engrossment	0.7	-0.3	-0.2	-0.2	-0.2
Escape	0.0	0.6	-0.3	-0.1	-0.1
Utility	-0.2	-0.3	0.7	0.0	-0.3
Challenge	-0.2	-0.1	0.1	0.7	-0.3
Boredom	-0.3	0.0	-0.2	-0.3	0.9

PUZZLE PRODUCT COUNCIL

To boost our insights, Liquid & Grit gathers recommendations and intelligence from industry-leading product experts.

Helen Grabarchuk	Florian Steinhoff	Florian Ziegler

Co-Founder and COO of PuzzleMove Inc.
LinkedIn Profile

Helen is a level design expert. At PuzzleMove Inc., Helen develops new puzzle products for different platforms, focusing on mobile devices.

Helen spent over two years at Zynga as a puzzle content creator.

After Zynga, Helen created concepts, puzzles, testing, and puzzle content for dozens of iOS and Kindle apps.

Mobile F2P Consultant
LinkedIn Profile

Florian has built and led teams that created top-grossing mobile casual games.

For the last 10 years, he has overseen game projects during all phases—research, concept, prototyping, pitching, pre-production, production, and live-ops.

His most successful title is *Jelly Splash*, which reached a monthly player base of +30M.

To find out more, check out his GDC talk on casual puzzle games, difficulty curves, and the importance of randomness here.

Consultant in Mobile Gaming
LinkedIn Profile

After over a decade of making games, Florian now advises game studios and companies on improving their game products through his own consultancy, Lava Lake Games Consulting.

Before launching his own consultancy, Florian worked at Electronic Arts on flagship titles, such as *Need for Speed: No Limits*. He also spent time at King as a principal designer.

At Mind Candy, he was the lead game designer on titles that include the mobile hit *World of Warriors*. This gained Apple's Editor's Choice Award and scaled the charts to the No. 1 game position in most major markets.

PREMIUM PARTNERSHIPS

Liquid & Grit partners with these premier market research and analytics companies to infuse our reports with the most relevant and detailed gaming user personas, data, and statistics available.

Quadrant Strategies	Kinrate Analytics	Sensor Tower
Market Research Quadrant Strategies	**Player Personas** Kinrate Analytics	**Mobile App Store Intelligence** Sensor Tower

Quadrant Strategies

Quadrant Strategies is a market research consultancy that uses research to help the world's most prominent technology, gaming, and entertainment companies develop strategies for building their user base, increasing user engagement and spend, and strengthening their marketing and brand plans.

We do that using a range of quantitative and qualitative methodologies, including gamer segmentation and persona development, feature testing, message creation, and loyalty and engagement modeling. The work of our senior leadership goes back many years, and includes long-term engagements for console and gaming-PC hardware-makers, individual games in a range of genres, and across consoles, PCs, and mobile, and for some of the top game franchises.

Kinrate Analytics

Kinrate Analytics offers game developers, consultants, publishers, and cloud gaming operators the best cross-platform game recommendation engine for targeted marketing, as well as a novel profiling-as-a-service solution for intelligent market segmentation and social networking.

Other services include advanced market prediction analyses for identifying emergent gaming trends and access to unique AI-enhanced data of 140 thousand game titles and 48 million game players.

The products of Kinrate Analytics have been developed in university-led research projects in collaboration with economists, psychologists, game scholars, and data scientists.

Sensor Tower

Sensor Tower is relied upon by financial analysts, VCs, and publishers who need to leverage data to identify the fastest-growing apps, emerging markets, and more.

Clients harness Sensor Tower's suite of app intelligence tools to:

- Evaluate app economies and app vitality.
- Drive organic growth with the leading App Store Optimization platform.
- Get the best global download and revenue estimates for the App Store and Google Play.
- Discover top creatives and better shape user acquisition strategy.

PUZZLE MECHANICS TAXONOMY

Family	Definition
Accelerators	Increases in the power, impact, or efficiency of play
Banks	Features that save a % of spend to be unlocked later
Bonuses	Free bonuses given to players (e.g., retention or W2E)
Challenges	Goal-oriented tasks for players to complete
Clubs	Groups that accomplish goals or compete with other groups
Collections	Sets of items that players collect (often for a completion prize)
Competitions	Features where players compete against other players
Cosmetics	Improvements or updates to the app or features
Currencies	Changes to currencies, economies, stores, and items
Custom Design	Options for cosmetic customization
Expansions	Additional rooms, worlds, play modes, VIP lounges, etc.
Flows	Specific flows, like the NUX, ratings, and surveys

Family	Definition
Hazards	Level elements/blockers that increase difficulty
Interactions	Social features with direct or indirect interaction
Leaderboards	Stand-alone leaderboards
Levels	Anything to do with leveling
Mini-Games	Smaller, shorter games within games (e.g., scratch cards)
Missions	Linear sets of tasks that players must accomplish
Notices	Feature or product announcements
Other	Miscellaneous features and outliers
Profiles	Features related to a player's settings, profile, and controls
Purchases	Anything to do with purchases
Quests	Tasks that advance players along a map-like feature
Rewards	Rewards players receive for engagement or spend

"You can cheat in solitaire, but there's nothing satisfying about cheating in solitaire."

– Vince Gilligan

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