



LIQUID AND GRIT

Puzzle Report

Competitive research and actionable product recommendations

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DECEMBER

2017

INTRODUCTION



“The key is to set realistic customer expectations, and then exceed them—preferably in unexpected and helpful ways.”
– Richard Branson

Dear Product Owner,

The best games will be predominately personalized. For good reason—personalization is a *powerful and low-risk* way to improve retention in more established games. In this report, we provide ways to take app-wide features and add customization to increase the ROI.

A great example of this is Cradle of Empires' UX option for left-handed players. This feature greatly improves playing experience for about 10% of the population (left-handed players) and has no negative impact on the other 90% (right-handed players).

Seekers Note improved app size. We mention this feature because although it was not personalized, it could have been. We show you how with a Casino app feature that allows players to turn on *Optimize Space* to automatically delete unused content. The result is self-moderated app size—a great feature for whales on older iOS devices and all players on Android.

Lastly, we love to highlight features that require little-to-no development, because they typically have high ROI (driven by low costs) and can make an impact without using your development team. In this report, we recommend ways to improve and personalize music—potentially even licensing popular music to *really* surprise and delight players.

Implementing a few of these features will yield solid results. To make your game *almost entirely* personalized, you will need a clear product vision. If successfully executed over the long-term, strong personalization will create a *strategic advantage* over other games that continue to release one-size fits-all features.

Brett Nowak
Editor-in-Chief

NEW INNOVATIONS

LEFT-HANDED INTERFACE

Cradle of Empires allows left-handed players to switch the UX for more convenient play

- The feature is marketed with a (!) jewel on the settings icon
- A *Left-Handed Interface* option is found in the *Additional Settings* (1)
- Clicking (i) provides more information about the feature (2)
- When enabled, the *Boost Panel* shifts to the left of the board (3 & 4)

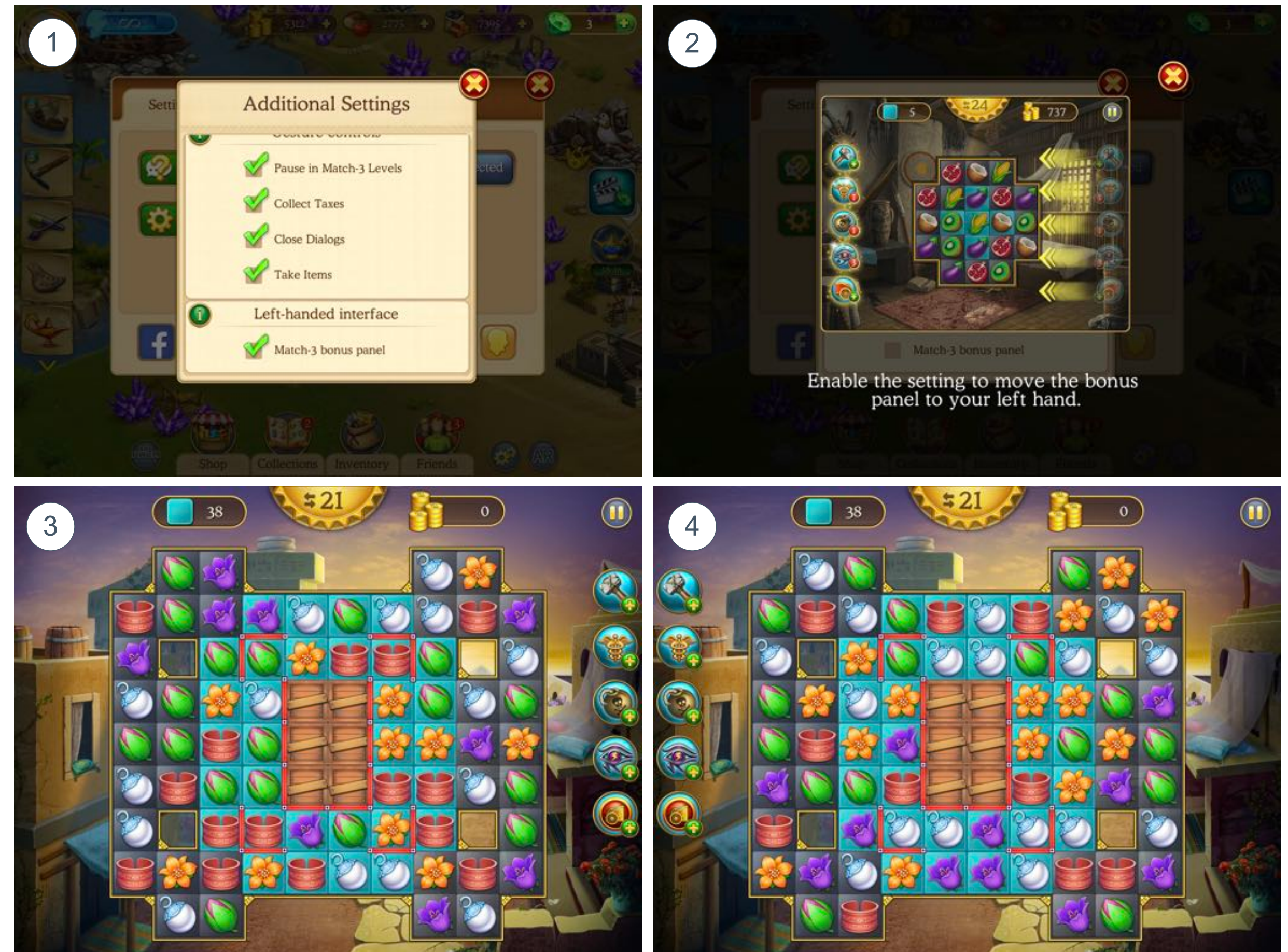
- Release: 11/13/17
- KPI: Retention
- Target players: Left-handed players
- [More images and videos](#)

Related features:

- [Favorites Tab](#) – Jackpotjoy Slots
- [Pre-Play Customizations](#) – December 2017 Slots Design Report

KEY TAKEAWAYS

- Increase personalization features—either driven by the player or the app—to boost retention in niche audiences
- Try to expand optimizations for a subset of players (like lefties) to more players. For instance, this feature could move the *Boost Panel* anywhere or hide it completely until a boost is activated. This option would be attractive to left-handed players, in addition to any player who did not want to see the panel while playing



APP SIZE OPTIMIZATION

Seekers Notes messages players about content specifically designed to minimize storage space

- Upon app-entry, players are informed that pictures with (?) are still downloading and not to worry (1)
- In Caesars Slots, players are informed upon app-entry that they may tap and hold to remove machines from their game to save space (2)
- In House of Fun, players may turn on *Optimize Space* so unused content is automatically removed (3 & 4)

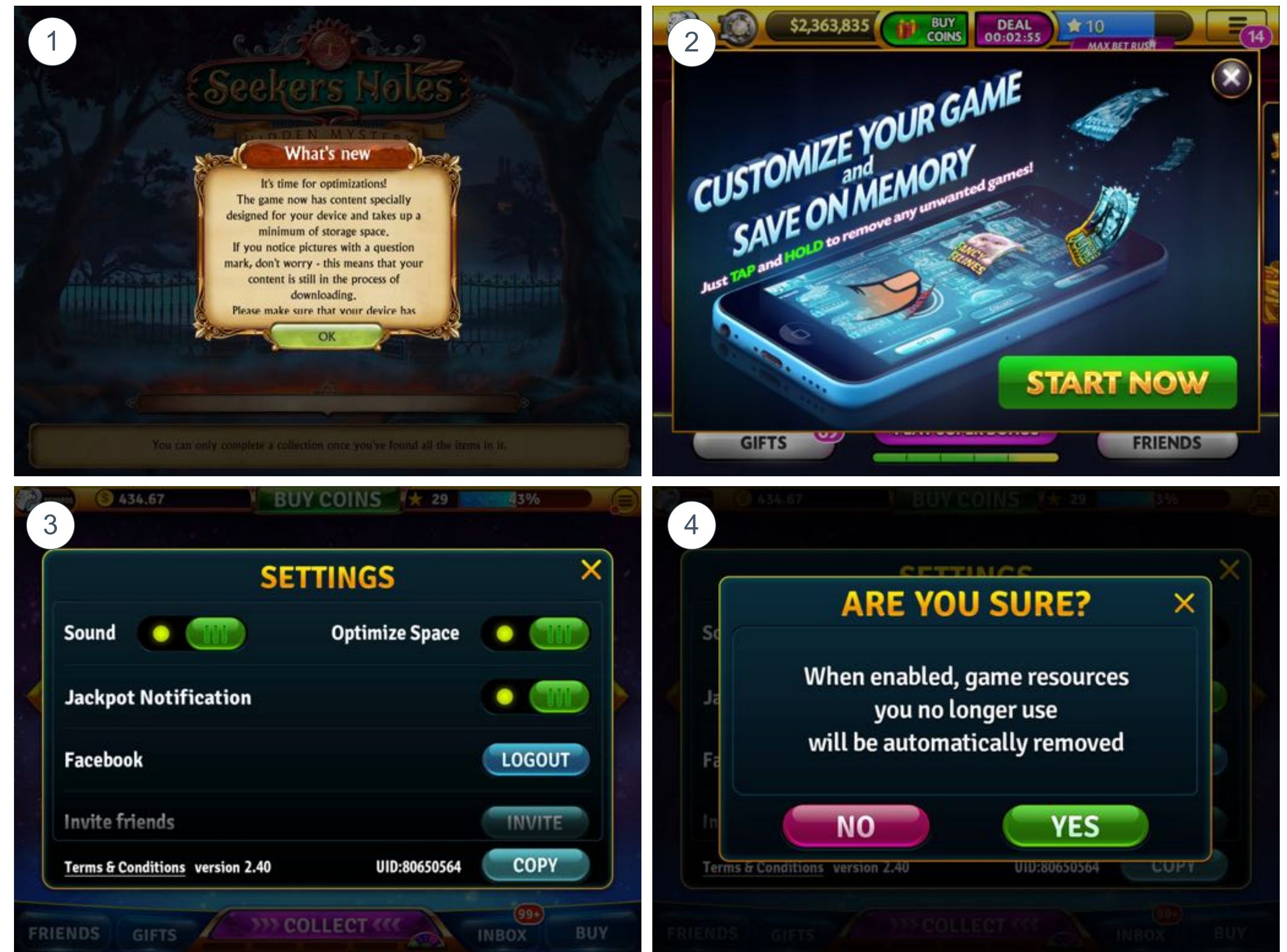
- Release: 11/13/17
- KPI: Retention, Revenue
- Target players: iOS players on older devices, all Android players
- [More images](#)

Related features:

- [Delete Machines](#) – Caesars Slots
- [Optimize Space](#) – House of Fun

KEY TAKEAWAYS

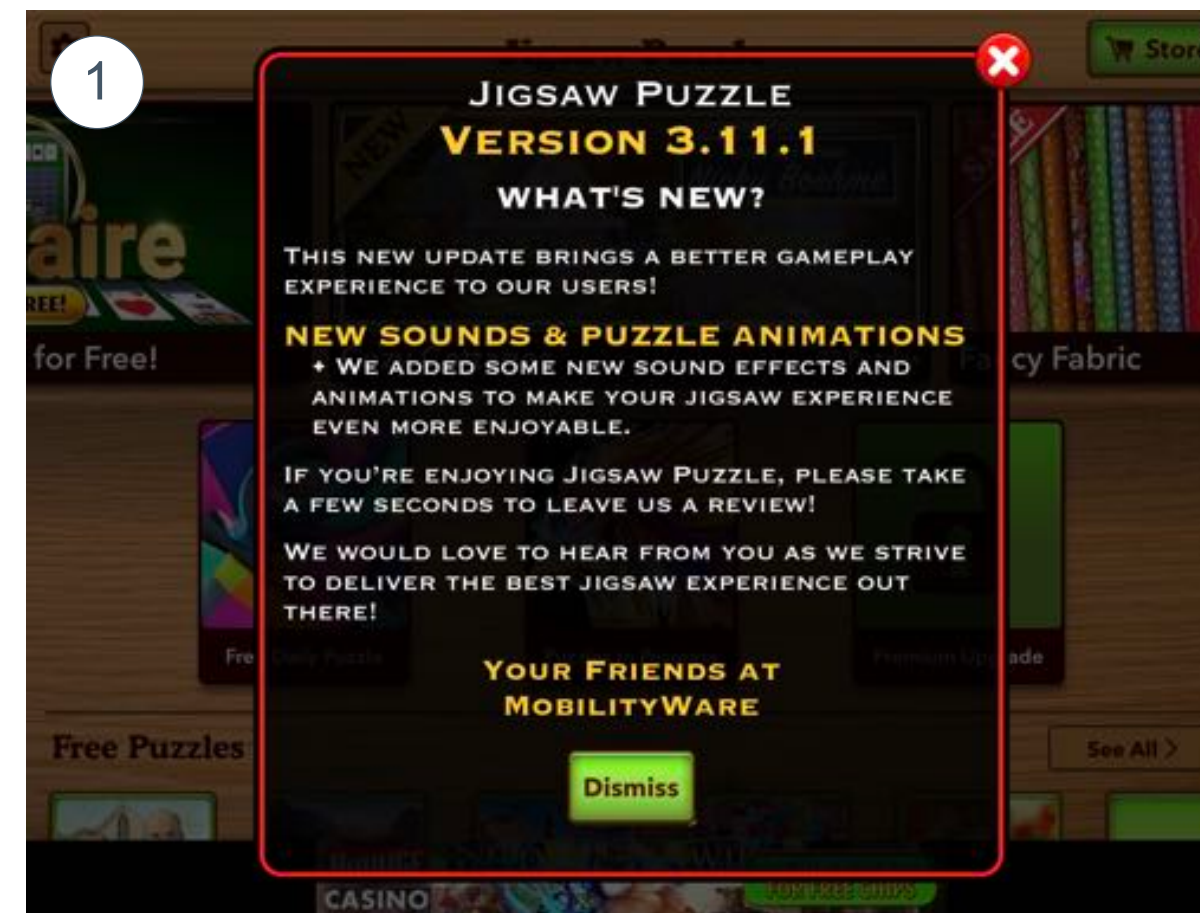
- Android players uninstall 2x more than iOS players due to storage space, app or device quality, and incentivized advertising (See [AppsFlyer Uninstall Report](#) for details)
- Market this feature as a benefit that your app has over a competitor with a large app (see [Casino Ads Dig](#) in Matchington Mansion for an example of positional marketing)
- Depending on development cost, implement this feature to delete storage automatically, like House of Fun's [Optimize Space](#), so that every player benefits



SURPRISE & DELIGHT

Add a few small development cost features to surprise and delight players and improve retention

- **Offer new music and sound effect options to delight players:** Often it is the small, more emotional features that retain players. This is also a great feature because it requires little development work (only sound work). In Jigsaw Puzzle's newest update, players are given new sounds and puzzle animation options (1)
- **Award players special gifts on *their* birthdays and use their friends' birthdays to drive retention:** *Birthday Reminders* is a successful retention mechanic in both Facebook and LinkedIn. In Candy Crush Jelly Saga, players received extra gifts *for the app's birthday*. Try shifting the focus to the player (2)
- **Set appropriate expectations and award players more on very hard levels to increase spend and decrease churn:** On certain levels in Gardenscapes, players are informed that certain levels in Gardenscapes are "Super hard" and awarded x2 stars upon completion (3 & 4)



LIVE OPS

COMPETITIVE EVENTS

Panda Pop *Return of Tour De Pop* is a competitive event that *selects* players to compete against

- During the event, players must beat the most levels to win (1)
- The app finds players to compete against after clicking START (2)
- Players may see their race position vs. the top players (3)
- The top 10 players receive a prize (4)
- Release: Original 8/24/17, Return 11/23/17
- KPI: Engagement
- Target player: Competitive players
- [More images and videos](#)

Related features:

- [Team Battle](#) – Wizard of Oz Magic Match
- [Legends Arena](#) – Toy Blast
- [PvP Towers](#) – Legendary Game of Heroes
- [Ranks](#) – Genies & Gems

KEY TAKEAWAYS

- Creating the right level of competition is the *key determinant* of positive retention in a competitive feature. Panda Pop has implemented a back-end system that selects the best players—ideally based on engagement and skill level—in order to create a positive experience
- The benefit of releasing a competitive feature as an event is two-fold: 1) it lets competitive players engage in the feature while non-competitive players may remain neutral, and 2) it releases the feature to 100% of players to increase the speed of the matching algorithm with more concurrent players



LEVEL DESIGNS

NEW LEVEL DESIGNS

New level mechanics released this month in the top grossing apps

Fill and Collect - *Jam Jars* in Gardenscapes

- Make matches to fill *Jars*. Then, use explosions or a second match of the same color for collection (1 & 2)
- [More images and videos](#)

Spreading Layered Hazard - *Buried Plates* in Fishdom

- Use explosions or matches to uncover *Plates* hidden under layers of plants. Plants that are not destroyed spread by first blocking one tile, and then covering over with a second layer (3)
- [More images and videos](#)

Multiple Matches - *Rich Suds* in Homescapes

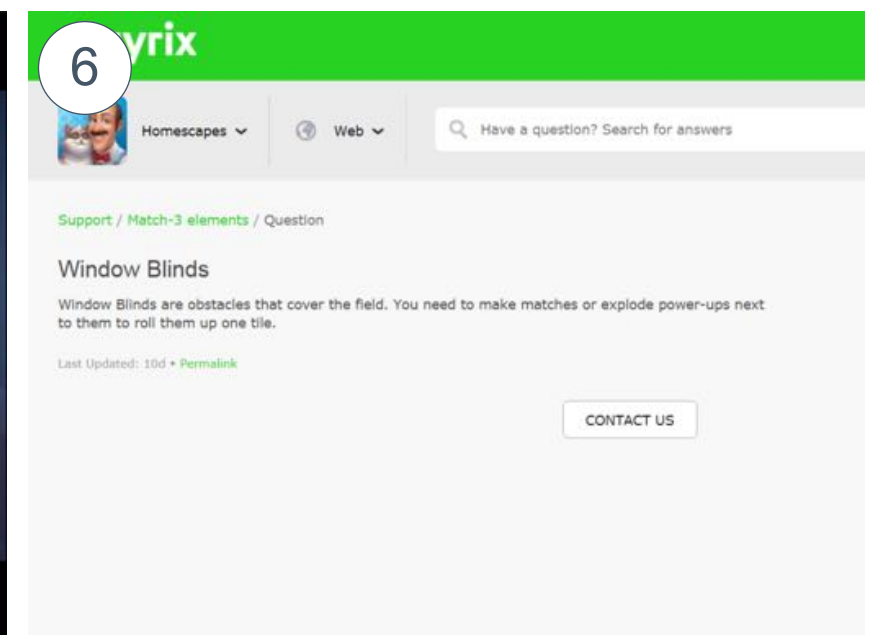
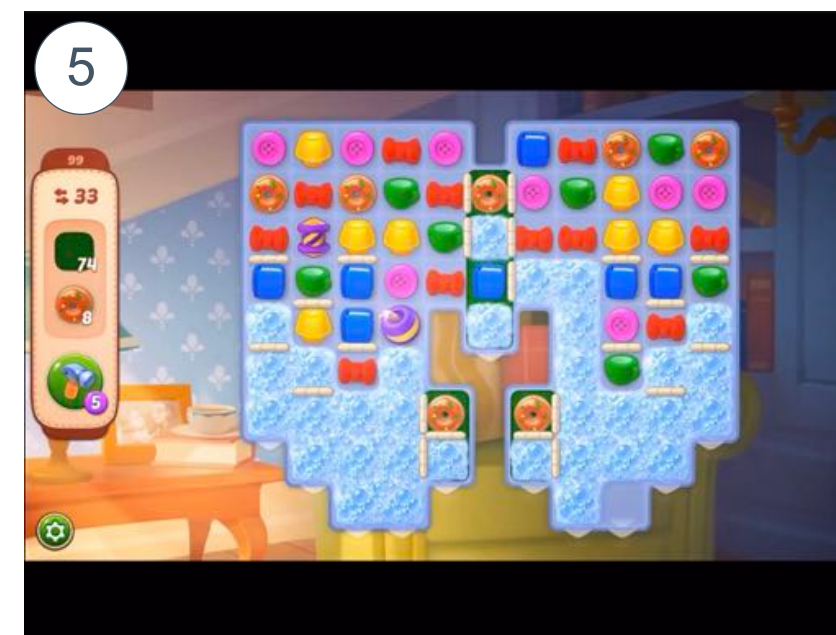
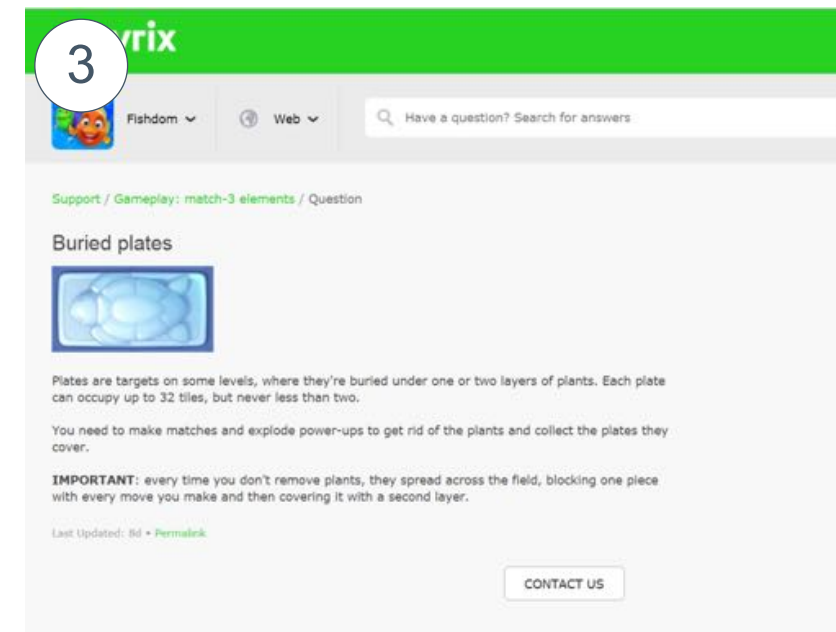
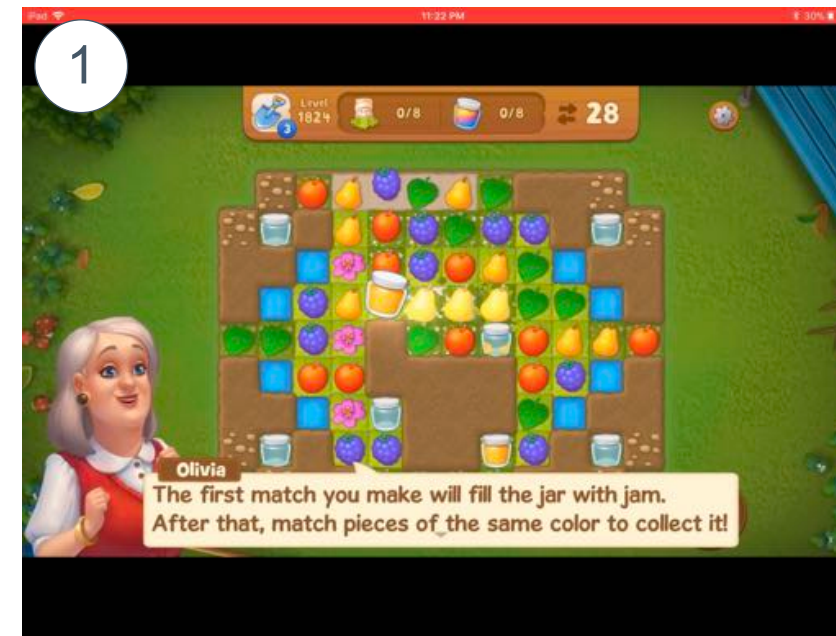
- Similar to *Suds*, *Rich Suds* are virescent and spread faster with each move, requiring two matches or an explosion to remove (4: *Rich Suds*, 5: *Suds*)
- [More images and videos](#)

Expose Area - *Window Blinds* in Homescapes

- Match three or create explosions to roll up *Blinds*, exposing more of the play area (6)
- [More images and videos](#)

Bonus Objects - *Black Pearls* in Seekers Notes

- During the *Long Fall* event, *Black Pearls* may be found and collected as an additional item not listed (7 & 8)
- [More images and videos](#)



MARKET WATCH

11/1/17 – 11/30/17

TOP GROSSING 1 – 7

App	Notable Features Released	Additional Information
Candy Crush Saga	<ul style="list-style-type: none">Event-specific booster releasedInventory area added to main screenCharity with proceeds going to help fight AIDS (released on multiple King apps)	<ul style="list-style-type: none">Party BoosterBooster BoxApps for RED
Homescapes	<ul style="list-style-type: none"><i>Newsfeed</i> added that includes character-driven postsNext update preview video reveals first event	<ul style="list-style-type: none">NewsfeedKnitting Story
Gardenscapes	<ul style="list-style-type: none">League event with new unlimited boost reward	<ul style="list-style-type: none">Electric Show
Fishdom	<ul style="list-style-type: none">Tournament released within the leagues feature	<ul style="list-style-type: none">Pearl Rush Tournament
Seekers Notes	<ul style="list-style-type: none">Space optimizations marketed to improve storage usage (see New Innovations for details)	<ul style="list-style-type: none">Space Optimization
Toy Blast	<ul style="list-style-type: none">UI change that removed the side tab menu and map, and added events to the main screen	<ul style="list-style-type: none">UI Change

TOP GROSSING 8 – 18

App	Notable Features Released	Additional Information
Hidden City Mystery	<ul style="list-style-type: none">Reskinned event lets players exchange previous event currency for new event currency	<ul style="list-style-type: none">Thanksgiving Day Secret
Cookie Jam	<ul style="list-style-type: none">Event awards boosts on later levels when a certain level is beat in a single life	<ul style="list-style-type: none">Surf Streak
Gummy Drop	<ul style="list-style-type: none">Event level challenge to reach the summit for rewards	<ul style="list-style-type: none">Everest Challenge
Farm Heroes Saga	<ul style="list-style-type: none">Hard levels now display animated flames	<ul style="list-style-type: none">Super Hard Levels
Candy Crush Jelly Saga	<ul style="list-style-type: none">Log-in birthday gift awarded to players celebrating Jelly Saga’s 5th birthday (see Surprise & Delight for details)	<ul style="list-style-type: none">Birthday Gift
Panda Pop	<ul style="list-style-type: none">Competitive event that selects players to compete against (see Live Ops for details)	<ul style="list-style-type: none">Return of Tour De Pop

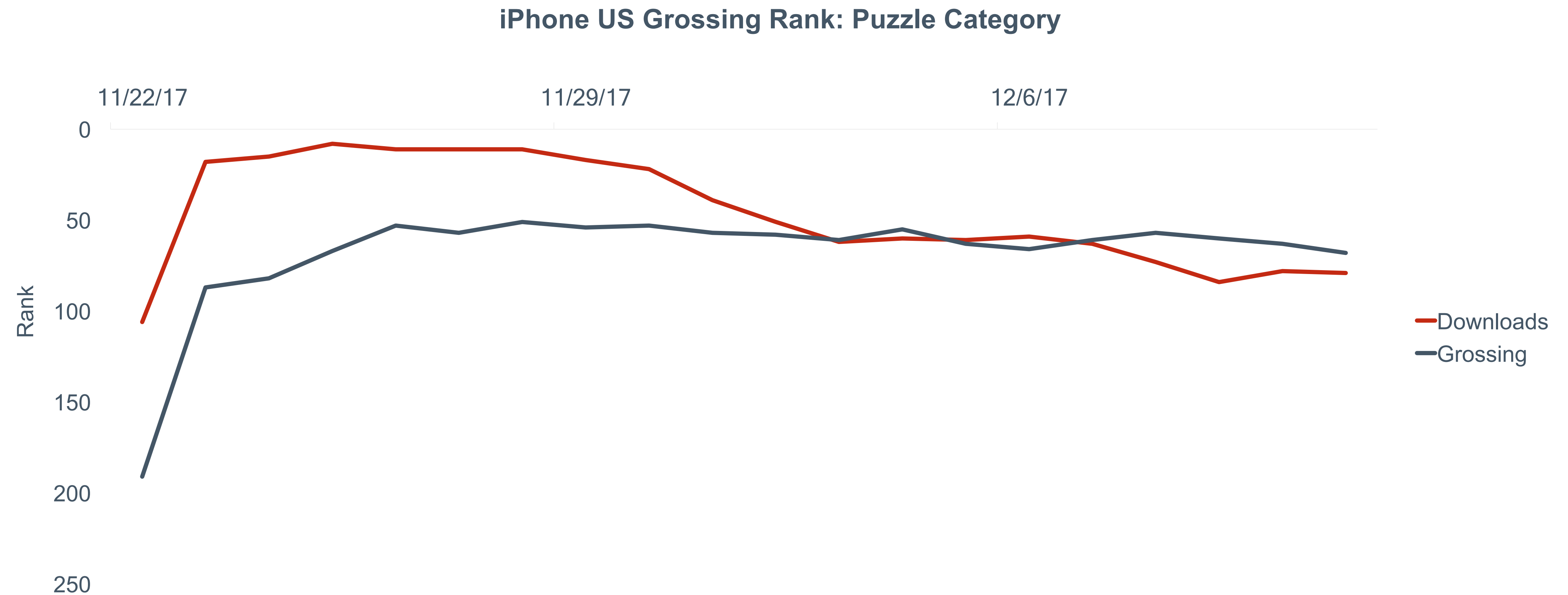
TOP GROSSING 19 – 30

App	Notable Features Released	Additional Information
The Secret Society	<ul style="list-style-type: none">Event with three challenges to collect items, complete event quests, and finish levels to win boosts, items, and avatars	<ul style="list-style-type: none">Sweet Venture
Fairway Solitaire	<ul style="list-style-type: none">Holiday-themed event offers three daily challenges, including a reward and <i>Whack-a-Gopher</i> mini game	<ul style="list-style-type: none">Happy Thanksgiving Event
Cradle of Empires	<ul style="list-style-type: none">Left-handed interface option added (see New Innovations for details)	<ul style="list-style-type: none">Left-Handed Interface
Genies & Gems	<ul style="list-style-type: none">Leagues with six tiers. Players movement based on new <i>Collection Clash</i> eventsDialogue added to hard levels. Completing hard levels in one life awards a special prize	<ul style="list-style-type: none">RanksHard Challenges Dialogue
Cookie Jam Blast	<ul style="list-style-type: none">Event awards boosts on later levels when a certain level is beat in a single life (similar event released in Cookie Jam)	<ul style="list-style-type: none">Blast Off
Pearls Peril Hidden Object	<ul style="list-style-type: none">Ten new regions to unlock for additional custom decorations	<ul style="list-style-type: none">10 New Regions
Jigsaw Puzzle	<ul style="list-style-type: none">New puzzle sounds and animations (see Surprise & Delight for details)	<ul style="list-style-type: none">New Sounds & Animations
Angry Birds Blast	<ul style="list-style-type: none">New league that combines <i>Mighty Tournament</i> and <i>Music Party</i> features into one league	<ul style="list-style-type: none">Mighty League

GAME TEARDOWN: PUZZLE FIGHTER

GROSS RANKING

Puzzle Fighter hard launched in November and climbed to the top 50 grossing before declining to the mid-60s. Downloads have followed a similar pattern



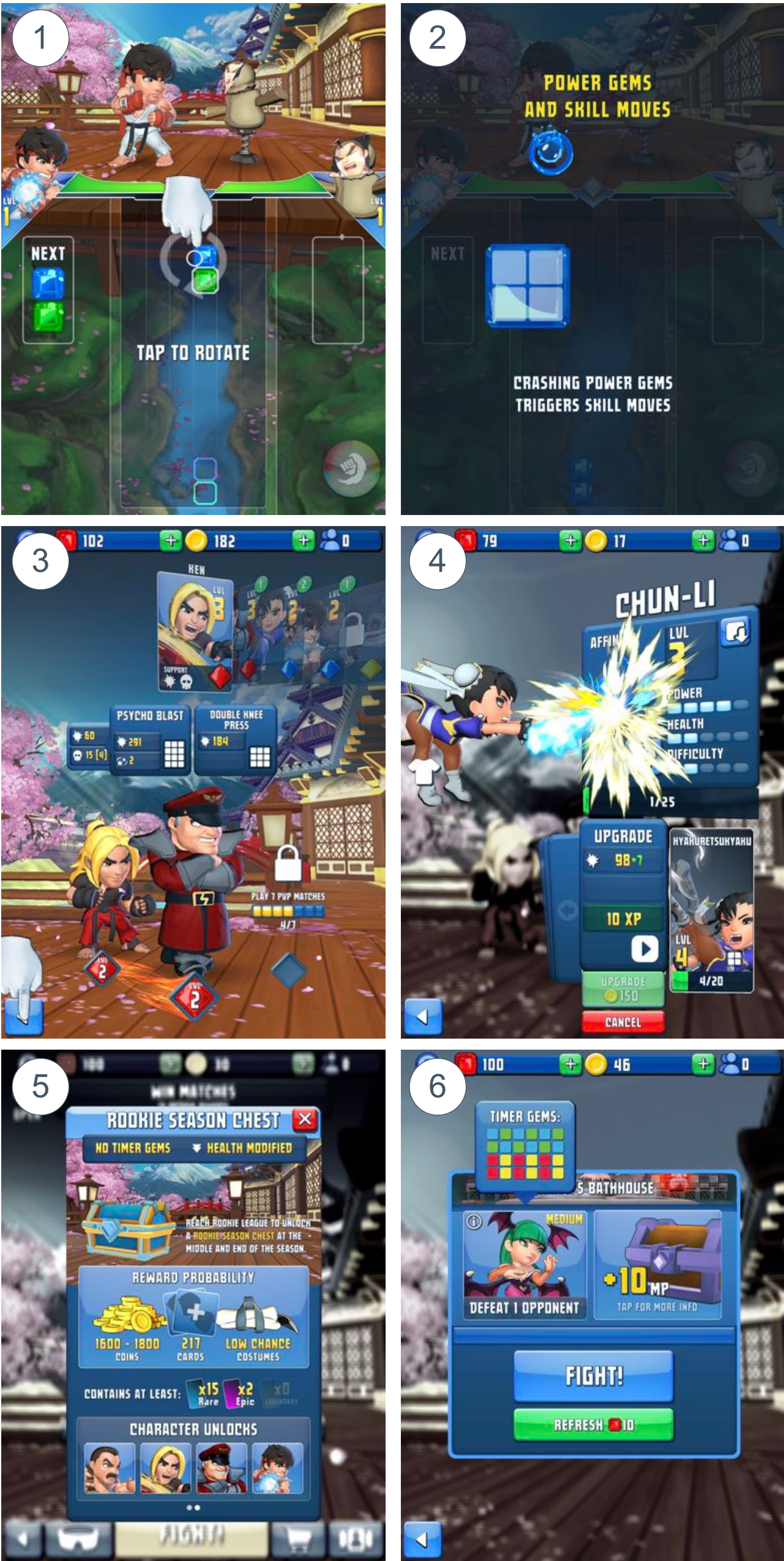
GAME SUMMARY

CAPCOM's Puzzle Fighter, a sequel to Super Puzzle Fighter II Turbo, is a block-matcher game with both single-player missions and PvP modes

- Game play is similar to [Puyo Puyo](#) by Sega, and feels like 'Tetris meets match-3' play (1)
- The skill of the game involves clearing certain colors and larger blocks for more powerful moves (2)
- Each character has two special moves and a color affinity. Destroying the character's color affinity produces more powerful damage. Players may also use *Supporter Characters* to have additional special moves and more color affinity power options (3)
- Players activate *Super Moves* that may impact their opponent's blocks and often include a secondary impact (4)
- There is a chest system that awards character cards and new characters. Character cards increase the power of each character and provide special moves (5)
- Players complete missions to receive *Mission Points*. Missions are limited based on time and new missions are released each day (6)
- Release: 9/27/17
- Additional reference: [Deconstructor of Fun](#)
- Related features:
 - [Chests](#), [Missions](#), [New User Flow](#)
 - Go to [Feature Database](#) > Puzzle > Game > Puzzle Fighter

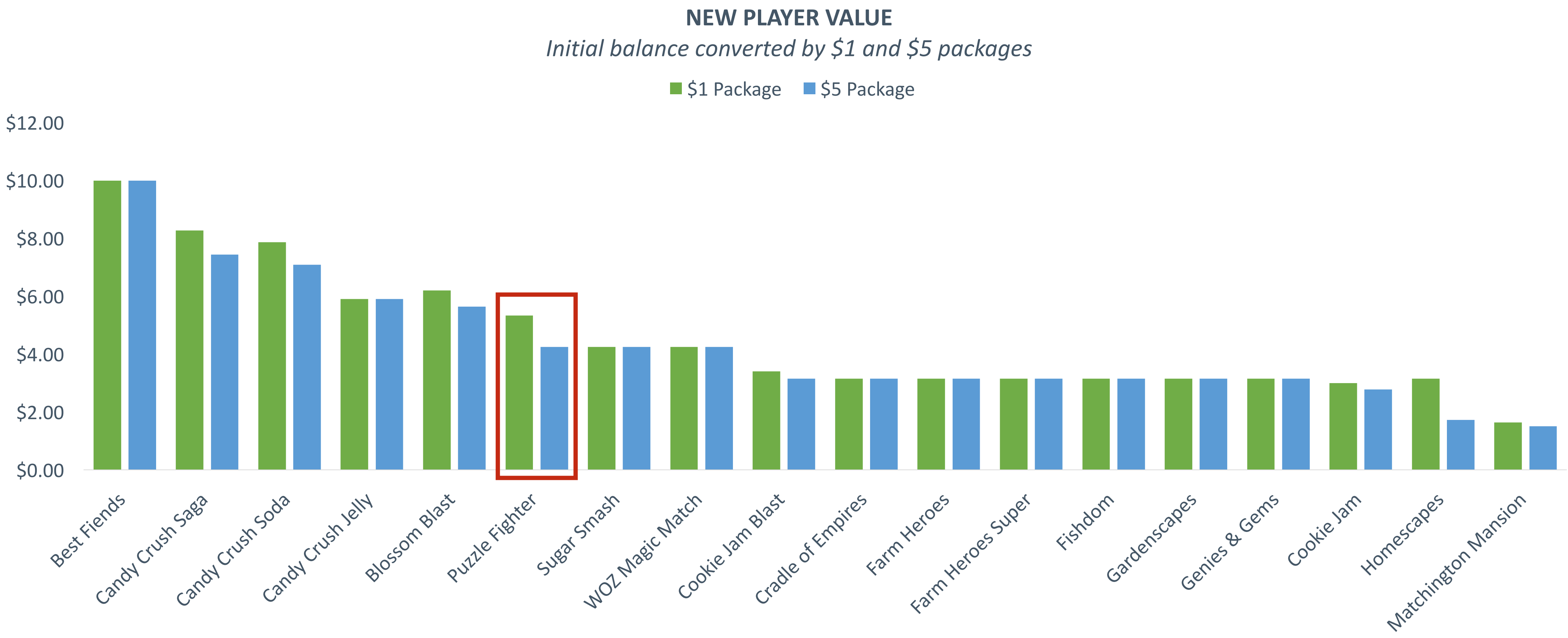
KEY TAKEAWAYS

- The target audience is very different from most of the top grossing Puzzle apps. Player overlap exists with Marvel Puzzle Quest, Dragon Ball Z Dokkan Battle, and Legendary - Game of Heroes
- The Puzzle category remains fairly devoid of IP-driven apps with only Family Guy (17th grossing), Disney (18th), Wheel of Fortune (25th), and Marvel (32nd) in the top 35 grossing
- Release new apps with fewer features. This app could have released the PvE after the PvP system (or not at all). Clash Royale is a clear example of a successful app with only PvP



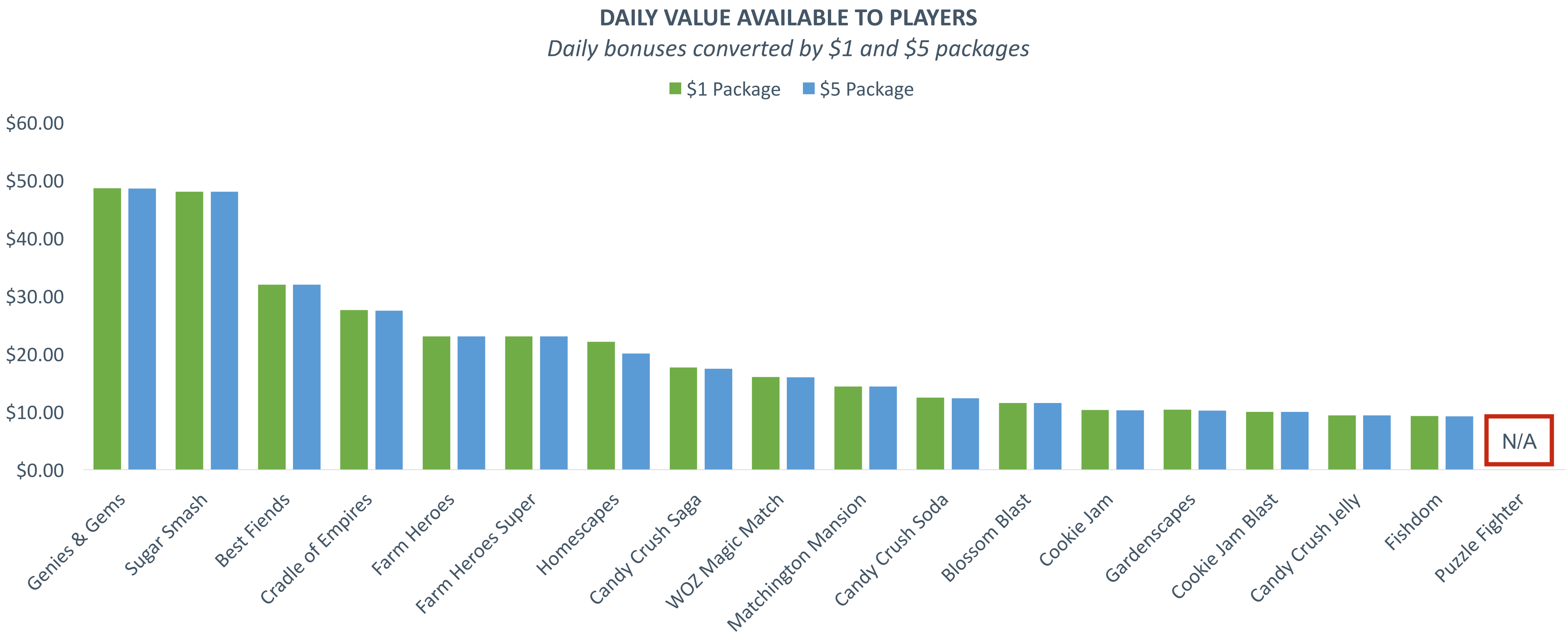
NEW PLAYER VALUE

Puzzle Fighter gives an above average value to new players when breaking down all the app economies using a \$1 and \$5 package separately



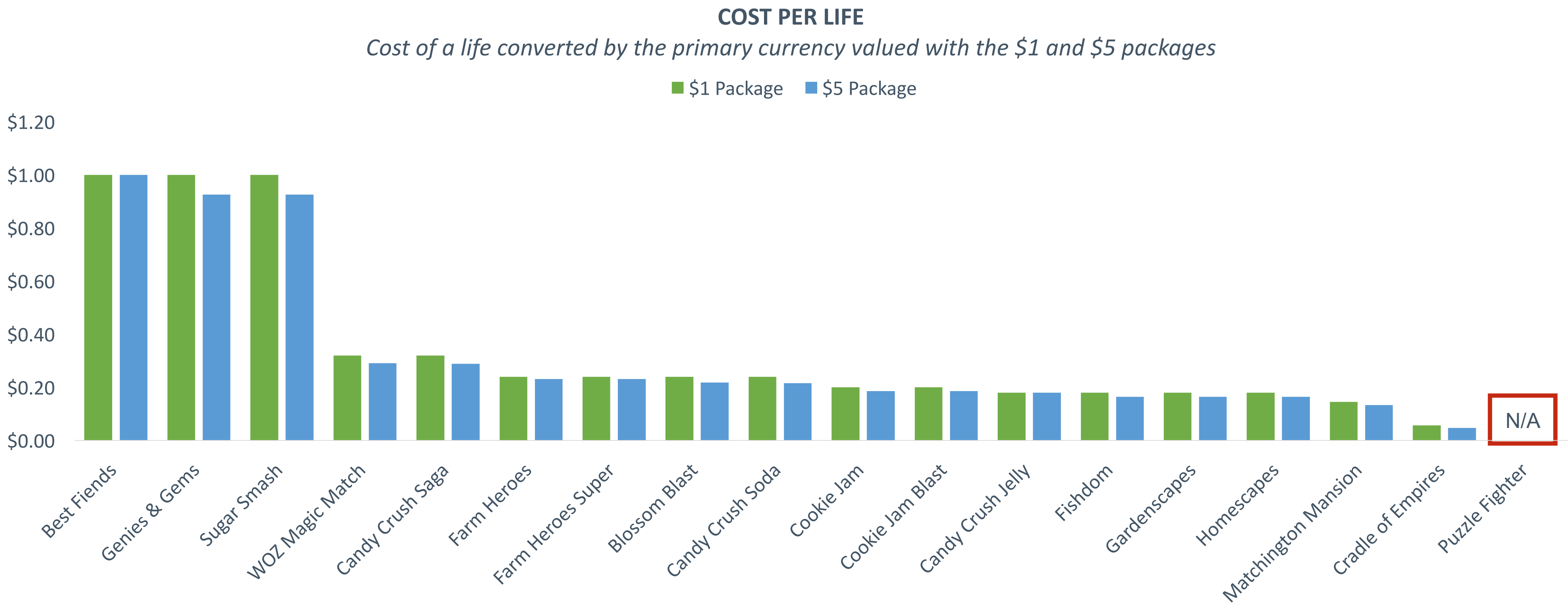
DAILY VALUE AVAILABLE TO PLAYERS

Puzzle Fighter does not have a retention bonus system. The only time-based meta-feature in the app is missions. A certain amount of missions are released each day. Players must come back the next day for new missions



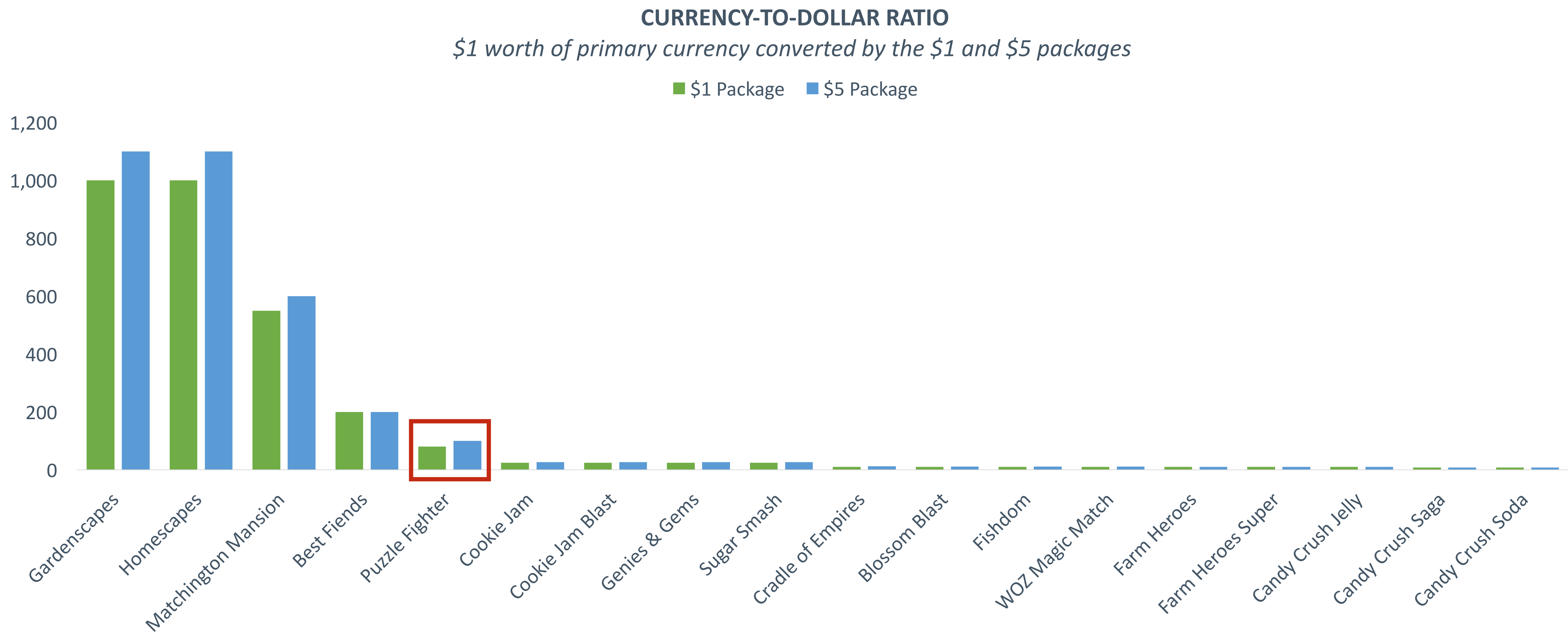
COST PER LIFE

Unlike most of the top grossing Puzzle apps, Puzzle Fighter has unlimited cost per life. As mentioned in the Game Summary, this app is comparable to Marvel Puzzle Quest, Dragon Ball Z Dokkan Battle, and Legendary - Game of Heroes



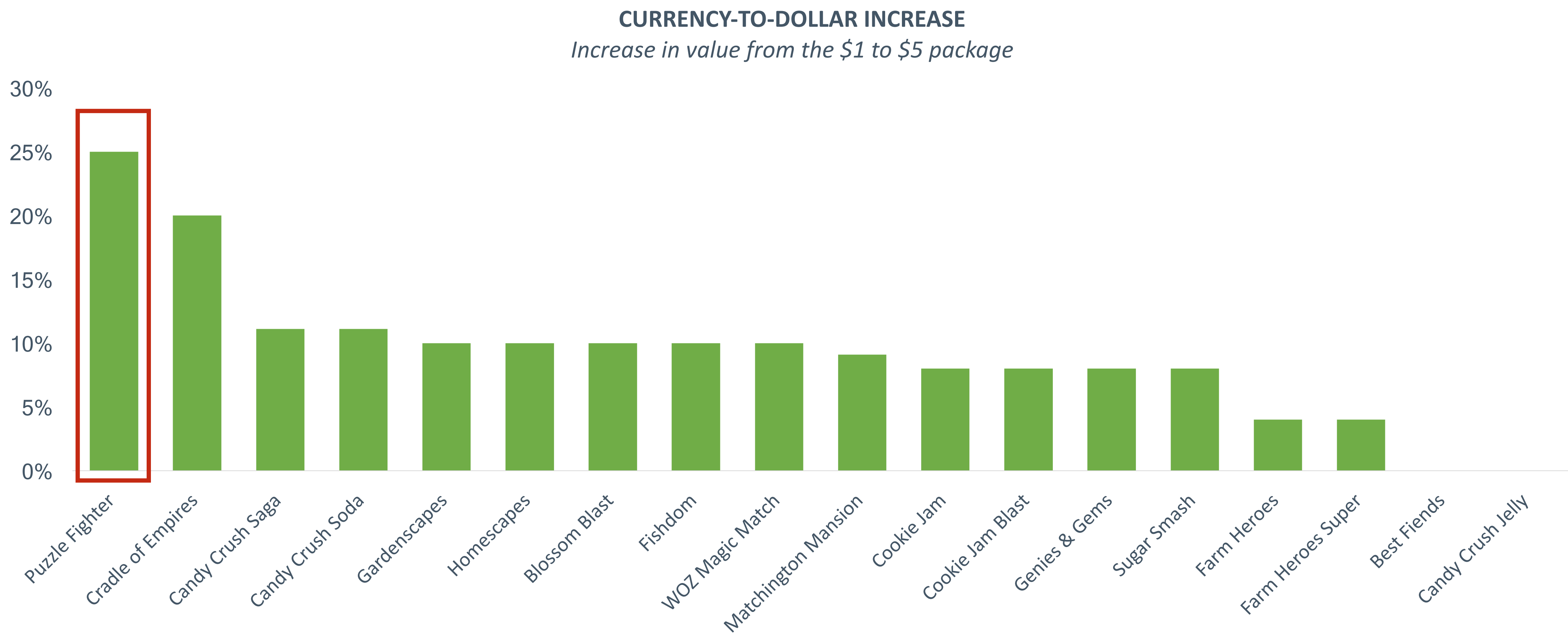
CURRENCY-TO-DOLLAR RATIO

The currency-to-dollar ratio is tuned above average relative to the top grossing Puzzle apps. The currency-to-dollar ratios for the \$1 and \$5 package are 80:\$1 and 100:\$1



CURRENCY-TO-DOLLAR INCREASE

The value per dollar increases by 25% in Puzzle Fighter from the \$1 to \$5 package, the largest increase in value compared to the top grossing Puzzle apps



APPENDIX

DATA COLLECTION PROCESS



Recommendations, information, and data comes from market research, app intelligence tools, and deep analyses of the apps

Market Research

- Each app is reviewed daily for updates, regardless of whether the app has been updated through the App Store
- Transaction information comes from the iOS App Store's In-App Purchases tab. These transactions are ranked based on the number of transactions
- Trending revenue, downloads, and package-rank data come from Sensor Tower Store Intelligence

App Information

- App information comes from a deep-dive analysis of each app
- In the Economy Teardown and economy-related slides, the currency value is determined by converting currencies into money using \$5 worth of non-sale purchasable currencies in each app
- For example, if an item costs 1,000 of the primary currency and players can purchase 500 for \$5, the value of the item is \$10. For apps without a \$5 package, the next closest package is used

“We keep moving forward, opening new doors, and doing new things, because we're curious and curiosity keeps leading us down new paths.”

— Walt Disney

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