LIQUID AND GRIT

Puzzle Report

Competitive research and actionable product recommendations

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OCTOBER

2017

INTRODUCTION

"A new type of thinking is essential if mankind is to survive and move toward higher levels." – Albert Einstein

Dear Product Owner,

In the mobile gaming industry, there is rapid change, immense opportunity, and very low risk. This environment is ideal to test new concepts that may lead to huge wins.

For the past three years, paid user acquisition has been the dominant method to grow users. But as you are well aware, this method is becoming saturated.

Teams that have found innovative ways to grow their user base have enjoyed great success. To increase engagement and Installs, Cradle of Empires just released an *iOS widget,* allowing players to more easily manage their empire, and *iMessage stickers,* enabling players to send game-branded texts to friends.

These two features will drive some results, *and more importantly*, generate information for Cradle of Empires' next test. High-beta tests, despite the propensity to fail, can increase your portfolio's value … and lead to the next *big thing*.

Don't forget that the features with the largest payouts are often the riskiest. Make sure you have a few in your roadmap.

Move to higher levels.

Brett Nowak
Editor-in-Chief

NEW INNOVATIONS

NEW INNOVATIONS

Leagues	• Boost retention	• Release a *League* system to allow players to compete and earn awards based on *League rank* and *tier* • Rank players based on boosts, instead of player levels, to reward engagement
iOS Widgets	• Strengthen engagement	• Increase engagement with an *iOS widget* that gives easy access to energy levels, bonuses, and event timers
PvP Play	• Drive up revenue	• Consider *PvP Play* to increase monetization for high value players. Clearly design this feature as "opt-in" so your social and progression-driven players are not turned off
iOS Gestures & Stickers	• Generate Installs	• Make the game more interactive and easier to play with *Gestures* • Use *iMessage Stickers* to generate Installs with creative ways to incorporate game items into text messages
Quick Hits	• Boost retention • Decrease churn	• Award a daily bonus to players who level up • Allow players to adjust difficulty to decrease churn • Consider adding an XP system to reward regular players who struggle to level up

LEAGUES

Release a *League* system to allow players to compete and earn awards based on *League rank* and *tier*. Rank players based on boosts, instead of player levels, to reward engagement

- Gardenscapes released *Leagues* involving a festival and host character (image 1).
- The *League* plaque holds a timer, tips, and four tiers (image 2).
- The Information icon explains how to top the leaderboard, move to higher *Leagues*, and earn prizes (image 3).
- During *League (Firework Festival)* events, rockets are awarded from boost explosions within a puzzle. Players may purchase boosts or create them with matches.
- An event leaderboard displays rankings, number of rockets collected, prize boxes, and *League* movement (image 4).
- Players' rank on the leaderboard is based on rockets collected (image 5).
- Final ranking determines movement within *League* tiers. Finishing at the top of the *League* promotes players up one tier. Likewise, a bottom ranking demotes one tier. Mid-level ranking results in no movement (image 6).
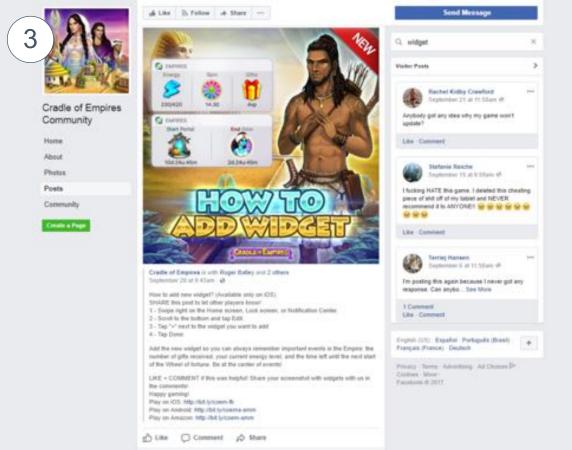
Click here for more images of this feature in the Feature Database. A Liquid and Grit account is required

iOS WIDGETS

Increase engagement with an *iOS widget* that gives easy access to energy levels, bonuses, and event timers

- Players are notified of Cradle of Empires' new *widget* upon app-entry (image 1).
- Installing the *widget* gives players instant game feature and events information—without the need to log-in (image 2).
- Instructions are on Cradle of Empires' Facebook page (image 3).
- Once the *widget* is installed, it displays energy amount, number of gifts, event timers, and whether the daily bonus is ready for collection

Click here for more images of this feature in the Feature Database. A Liquid and Grit account is required

PvP PLAY

Consider *PvP Play* to increase monetization for high value players. Clearly design this feature as "opt-in" so your social and progression-driven players are not turned off

- Legendary Game of Heroes' *PvP Tower Events* are battles between two players (image 1).
- Players must choose five cards as defenders (image 2). *Battle Keys* are needed to participate in the event.
- *Event Towers* have a floor system, where higher floors mean more difficult opponents.
- Each *PvP Tower battle* is a timed, five wave battle of match-3 play to defeat an opponent's defenders (image 3).
- Defeating three waves of defenders in battle gives winning players the option to either, 1) end the battle and claim the rewards, or, 2) continue the battle to steal *Guild Trophies* from the opponent by defeating all five waves (image 4).
- Losing a battle triggers a dialogue displaying three options: give up, restore health, or restore health with a boost (image 5).
- Three battle losses ends all win streak progress and demotes players down a *Tower Level*.
- Stealing an opponent's *Guild Trophies* places a target for 'Revenge' on you, inviting everyone in the opponent's *Guild* to help recover the *Guild Trophies* (image 6).
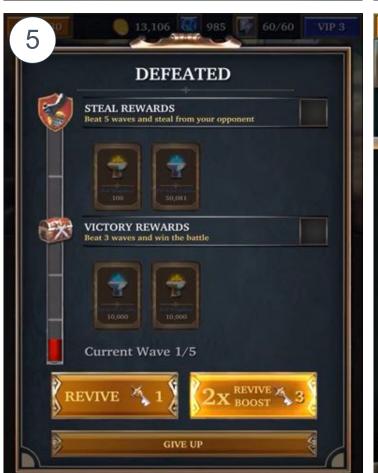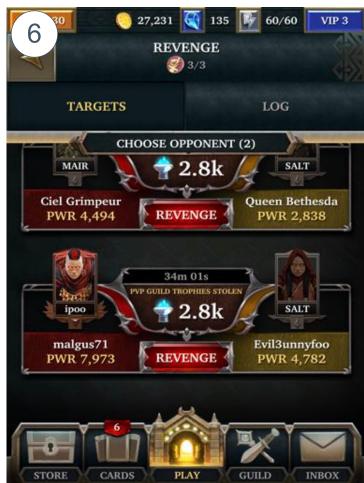
Click here for more images of this feature in the Feature Database. A Liquid and Grit account is required

GESTURES & STICKERS

Make the game more interactive and easier to play with *Gestures*. Then, use *iMessage Stickers* to generate Installs with creative ways to incorporate game items into text messages

Gesture Control
- Players are notified about new iOS features with icons on the quest menu (image 1).
- The *Gesture Controls* icon opens a dialogue explaining in-game *Gestures*. <u>Players are then awarded for shaking their device to close the dialogue</u> (image 2).
- *Gesture Controls* are found in the Settings menu and <u>allow players to collect resources, pause, or unpause game play by shaking an iOS device</u> (image 3).
- Swiping two fingers on the screen instantly collects any items lying on the map (image 4).

Stickers
- <u>Clicking on the *iMessage* icon awards players for sending a Cradle of Empires' *iMessage Sticker* to a friend</u> (image 5).
- Clicking 'Onward' in the quest dialogue opens iOS messages. Selecting the Cradle of Empires Icon along the bottom of the screen displays various related stickers (image 6).
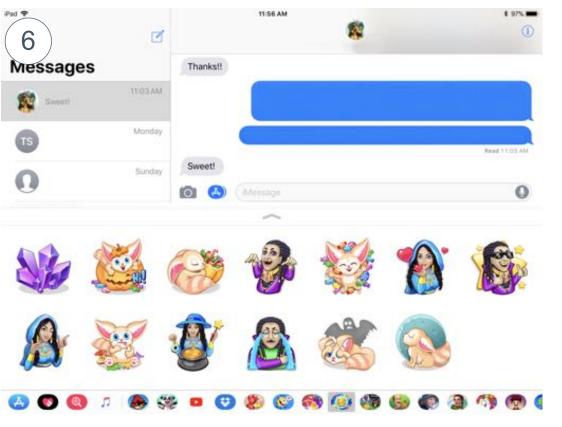
> Click here for more images of this feature in the Feature Database. A Liquid and Grit account is required

In match-3 levels, you can pause and unpause the game by shaking the device.

Swipe with two fingers to instantly take all items lying on the City map.

QUICK HITS

Award a daily bonus to players who level up. Allow players to adjust difficulty to decrease churn. Consider adding an XP system to reward regular players who struggle to level up

Treasure Chests:
- In Gummy Drop, the *Treasure Chests* feature was converted into a retention bonus. To collect the bonus, players are required to play a level every day (image 1). Players receive increased rewards for consecutive days of play (image 2).

Adjust Difficulty:
- In Best Fiends, a slide bar to *Adjust Difficulty* gives players five levels of play to choose from: easy to insane (image 3). Completing a more difficult challenge yields higher rewards (image 4).
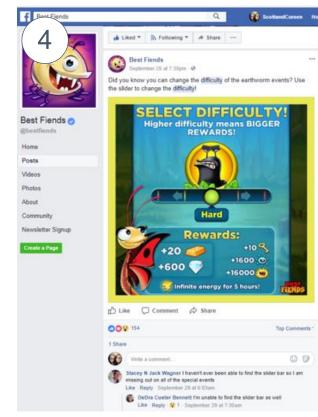

Experience Leveling:
- Candy Crush Saga is currently testing *Experience Leveling* with a ranking system*. Player ranks are displayed on profile icons with a fill meter. Completing puzzles earns points, filling the *Experience Meter* (image 5).
- Players are awarded $1.08 worth of lives every time they rank up. They earn lives and a new *Profile Frame* every fifth rank (image 6).

* The testing was confirmed by contacting King's customer service

LIVE OPS

LIVE OPS

Boost current progression events by adding independent progression systems, unlockable sales, and collection sets

- **Create an <u>independent</u> progression system within the same event to award win streaks**:
  - Wizard of Oz Magic Match introduced a *Win Streak* and meter in *Save The Farm* (image 1).
  - Completing levels in one life increases the *Win Streak* multiplier (image 2).
  - <u>Failing a level resets all *Win Streak* progress, but not event progression</u> (image 3).
- **Offer players timed value offers unlockable only through progression**: In Best Fiends, completing levels and progressing through the *Boot Camp* event unlocks a timed *Boot Camp Mega Bundle*. Players are praised on exceptional skills in a dialogue displaying a 15 minute timer and the bundled offer (image 4).
- **Add a collection mechanic to a level-based theme event to dynamically tune difficulty based on player type**: Family Guy AFMG's Grammy-themed event, *The Tommys*, features nine levels to complete for the *Tommy Award* (image 5). Successfully completing a level awards players: boosts, lives, or one of three collection items needed to win the award (image 6).

LEVEL DESIGN

LEVEL DESIGN

- ***Roaming:***
  - *Floats* in Gardenscapes are roaming elements collected when matches of the same color are made next to them (image 1).
  - If a *Float* is not collected in two moves, it relocates to another place on the board (image 2).
- ***Indestructible & Spreading:***
  - The *Barrel of Oil* in Fishdom is a set hazard element which cannot be removed (image 3).
  - Boosts and explosions are ineffective on the barrel, continuously spreading oil every turn (image 4).
- ***Lock & Key Blocker:***
  - *Chests* in Cradle of Empires appear on the board blocking other areas of the puzzle (image 5).
  - Matching three *keys* anywhere on the board unlocks the nearest *chest*, removing it and opening the area (image 6).

Collect Floats by matching adjacent pieces of the same color

This element stays put for two moves, and then relocates to a different spot unless you collect it!

A barrel of oil is a set element. You can't get rid of it.

The barrel will still ooze oil every move

Chest

Make three keys in a row to unlock the nearest chest.

OK

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MARKET WATCH

9/1/17 – 9/30/17

TOP GROSSING 1 – 10

App	Notable Features Released
Candy Crush Saga	• XP system in testing (see Quick Hits for details) • The season-based section, *Mighty Mountains,* is closed
Gardenscapes	• *Leagues* released (see New Innovations for details)
Fishdom	• Preview the October update with YouTube video <u>here</u>
Cookie Jam	• Live ops event, *Cookie Walk,* awards players for completing five levels in one life (see screenshots in the <u>Feature Database</u>)
Gummy Drop	• Retention bonus, *Treasure Chests*, replaces *Buried Treasure Chests* (see Quick Hits for details) • Half of all *Resource Marts* were eliminated but the generation rate was doubled, resulting in the same output • 3rd birthday celebration awarded players with *Travel Vouchers* to permanently unlock any city (see screenshots in the <u>Feature Database</u>)

TOP GROSSING 11 – 30

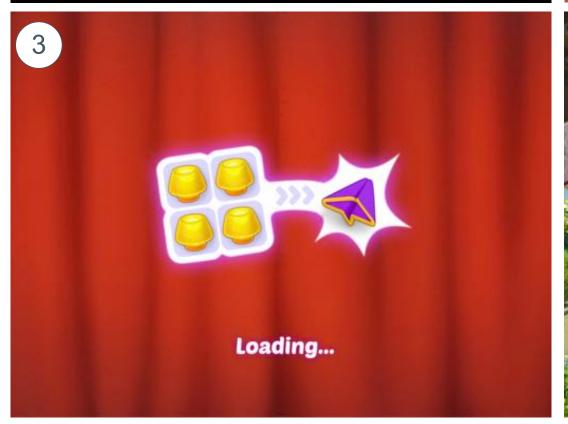| App	Notable Features Released
Cradle of Empires	• An *iOS widget* was released to easily monitor lives, gifts, events, and bonus timers (see New Innovations for details) • *iOS Gesture Controls* and *iMessage stickers* are now available (see New Innovations for details)
Cookie Jam Blast	• Request system, *Buddy Bee Charge,* was released that lets players earn boosts from friends (see screenshots in the Feature Database)
Best Fiends	• Live ops event, *Fail Meter,* added to *Boot Camp* events that gives players three fails before progression is lost (see screenshots in the Feature Database) • Players are now allowed to *Adjust Difficulty* in *Earthworm* events, giving players a choice of five levels of difficulty (see Quick Hits for details)
Charm King	• Collection event, *Charm Bracelet*, released for players to unlock rewards (see screenshots in the Feature Database)
Family Guy Another Freakin' Mobile Game	• Live ops event, *The Tommys,* is a play on the Grammys. Event contains nine levels for boost awards (see Live Ops for details)

ECONOMY TEARDOWN: HOMESCAPES

HOMESCAPES

Homescapes offers players an expansion on Gardenscapes. Includes additional match combinations for a new boost, and match to spread obstacle. It does not offer a daily bonus

- In Homescapes, players must complete tasks through match-3 puzzle play (image 1).
- Every puzzle level displays various goals, hazards, and obstacles players must overcome to successfully pass a level. A *'Match to Spread'* carpet feature was added, along with other similar Gardenscapes' gameplay features (image 2).
- There are four boosts to unlock during play: *Hammer*, *Bomb & Rocket*, *Rainbow Ball*, and the new *Double Planes*. A single *Paper Plane* may be created during play by matching four pieces into a square—a match element NOT offered in Gardenscapes (image 3).
- Players are awarded one star for completing a puzzle and coins based on moves remaining. Stars are used to complete tasks listed on the *To Do List*, with most activities giving players a choice between three items (image 4).
- Homescapes' collection mechanic includes an in-game social media page with *Newsfeed*, *Pictures,* and *Friends* centered around gameplay activities, similar to Gardenscapes (image 5).
- Currently, the only retention bonus awarded to players is a free life every 30 minutes (image 6).
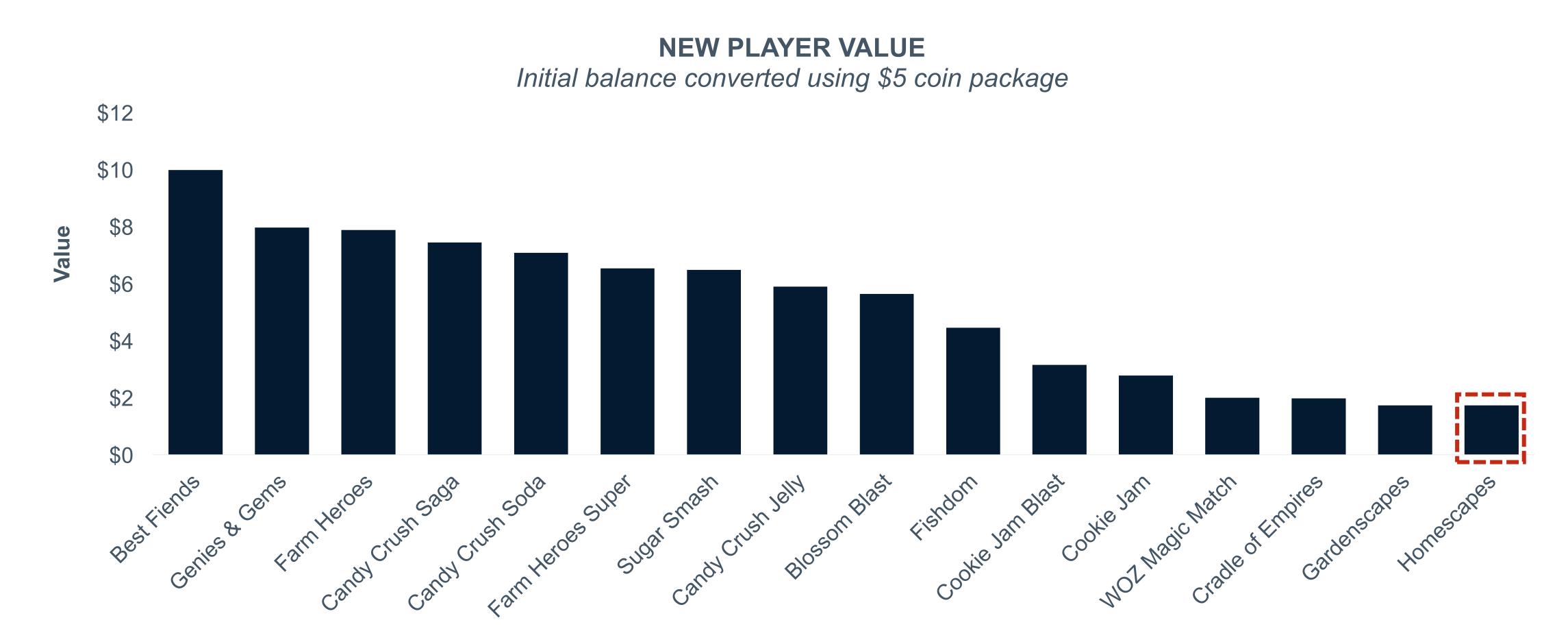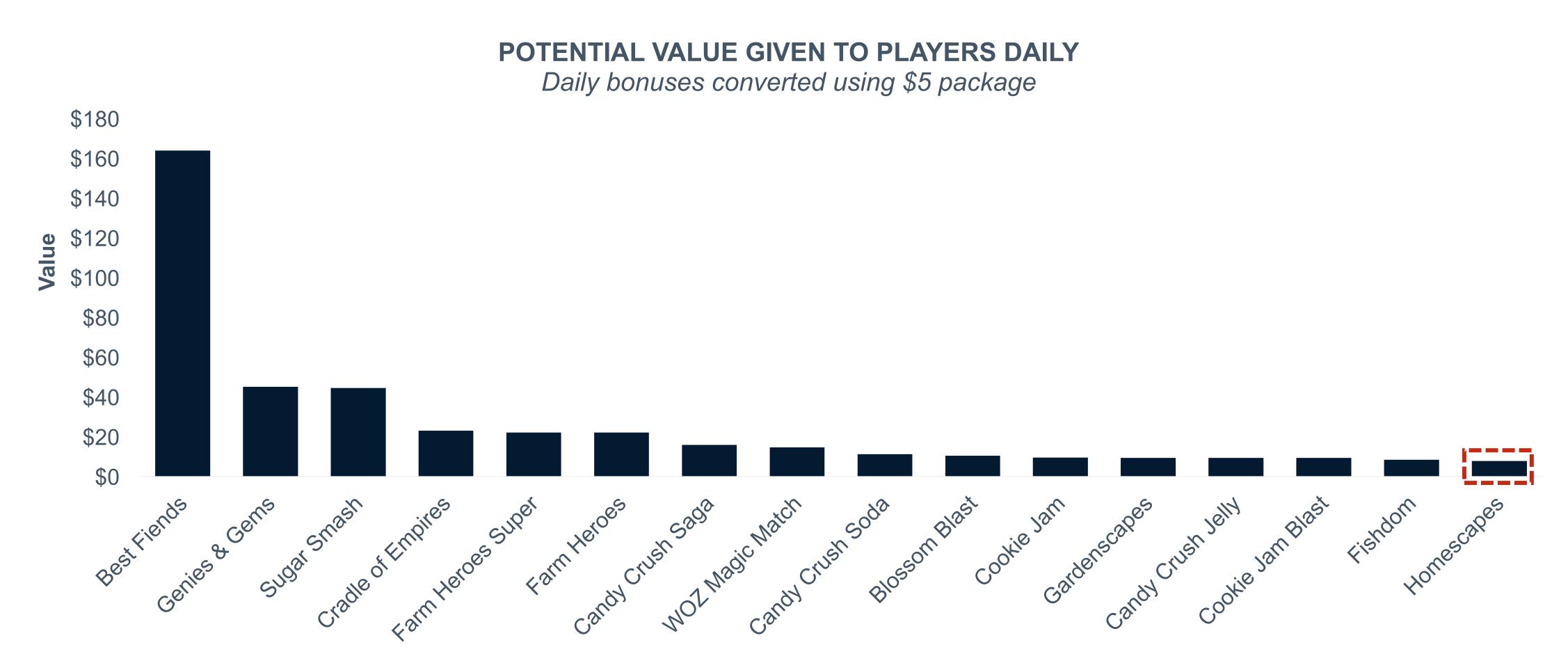
NEW PLAYER VALUE

Homescapes, like Gardenscapes, gives new players a very small amount of value upon Install. This drives up D7 ARPU and sets players' expectations with regards to game difficulty and progression
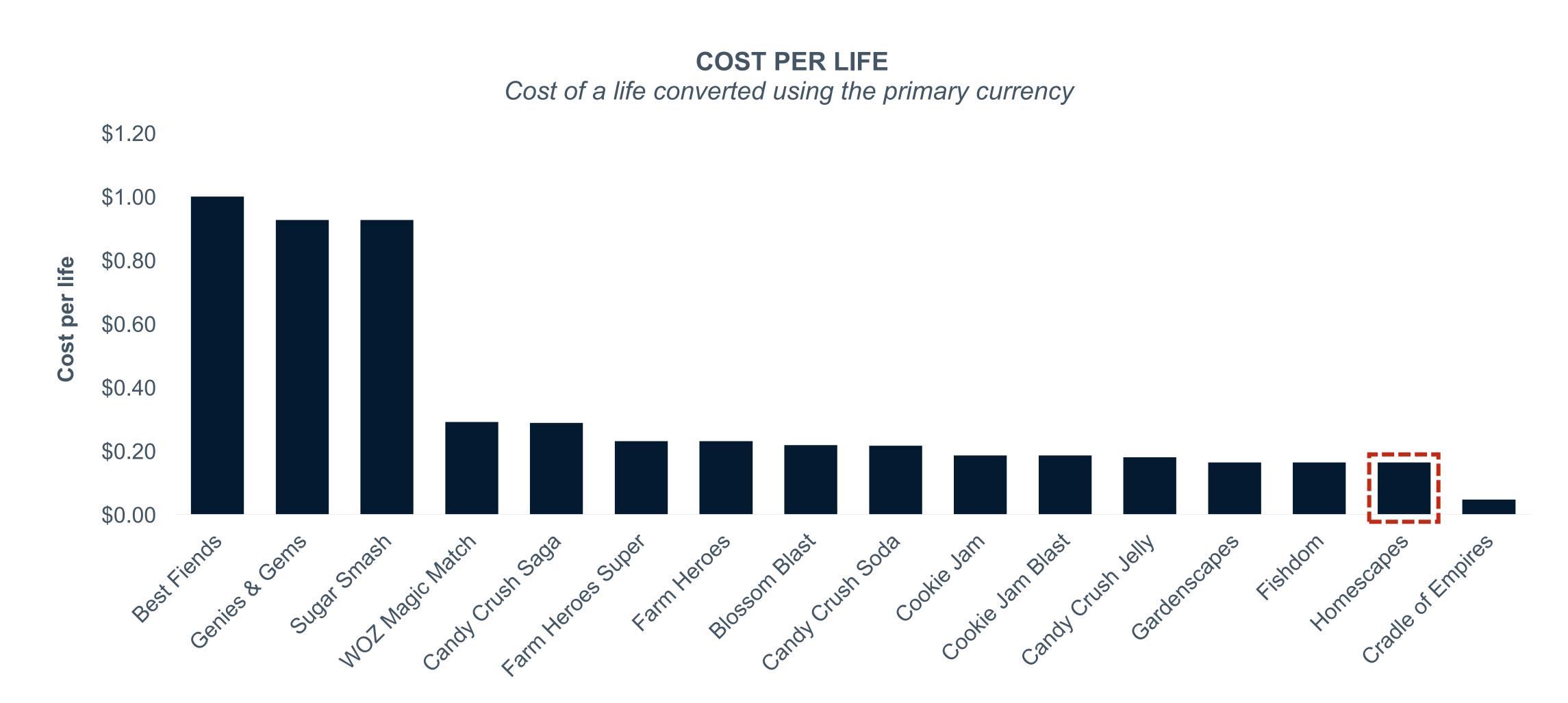
NEW PLAYER VALUE
Initial balance converted using $5 coin package

POTENTIAL DAILY VALUE

Homescapes continues to tune the game tightly for returning players. Minimal free daily value is given to players in a bonus mechanic that is offered every 30 minutes
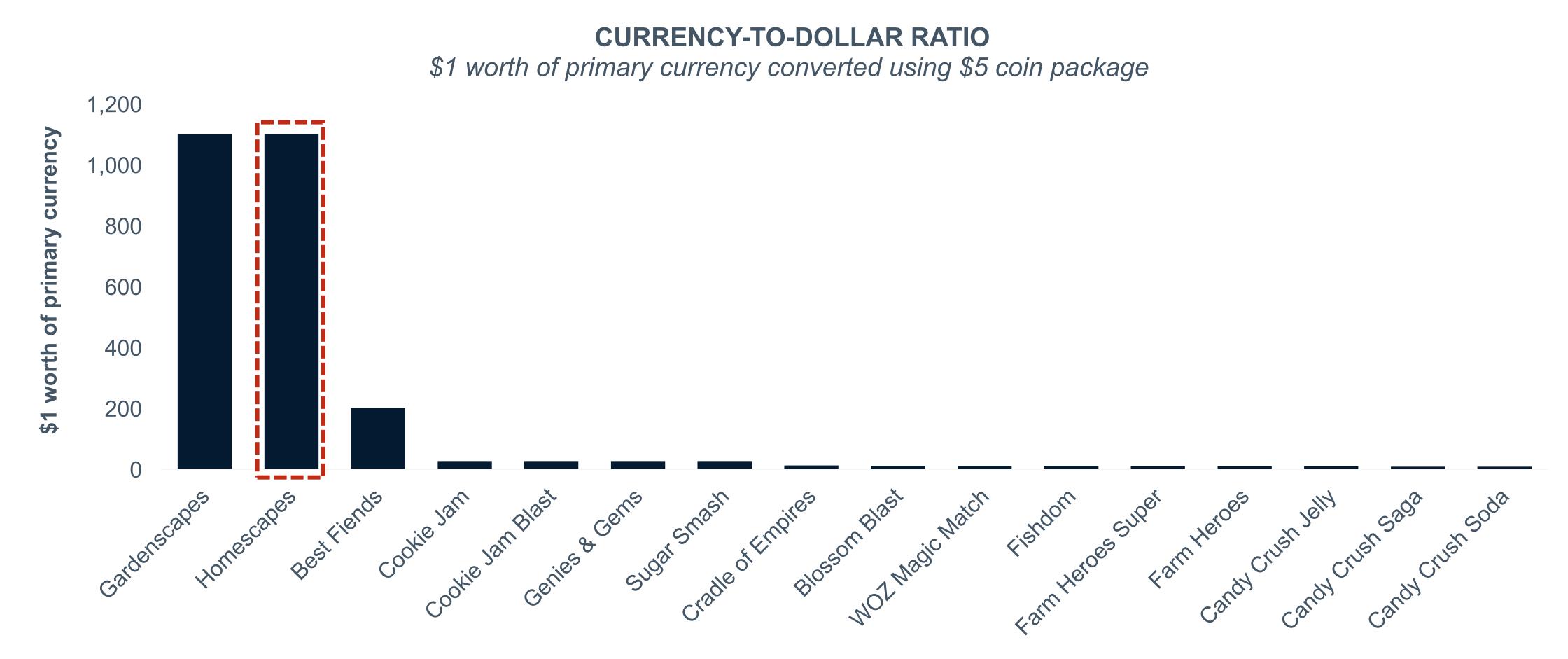
POTENTIAL VALUE GIVEN TO PLAYERS DAILY
Daily bonuses converted using $5 package

COST PER LIFE

Cost per life in Homescapes is low so players may enjoy some game play and establish spending habits

COST PER LIFE
Cost of a life converted using the primary currency

CURRENCY-TO-DOLLAR RATIO

Homescapes is tuning the economy for *payers* with the most inflated economy compared to the other top grossing Puzzle apps. Payers in Homescapes *feel* like they get more for their dollar with such an inflated economy

CURRENCY-TO-DOLLAR RATIO
$1 worth of primary currency converted using $5 coin package

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 coins and players can purchase 500 coins for $5, the value of the item is $10. For apps without a $5 package, the next closest package is used.
- The cost of each level is determined by how many currencies are needed to complete the level. Then, that amount is converted to a dollar amount using $5 worth of non-sale purchasable currency, as mentioned above.

"The way to get started is to quit talking and begin doing."

– Walt Disney

LiquidandGrit.com

Brett.Nowak@LiquidandGrit.com