LIQUID&GRIT

Puzzle Report

Competitive Research and Actionable Product Recommendations

EXECUTIVE SUMMARY

"You can design and create, and build the most wonderful place in the world. But it takes people to make the dream a reality."
– Walt Disney

Revenue Drivers
Matchington Mansion released an innovative purchase event that added *Trees* to sales bundles. Once fully grown, *Trees* award additional value to the purchaser. Review this section to learn how this feature drives transactions ... and how to increase the revenue impact.

In Soft Launch
Not yet live in the U.S., Rovio's Angry Birds Pop 2 wraps a *Character* collection feature around bubble popper level mechanics. Check out this section to see the revenue opportunities and sub-markets that Rovio will target.

Breakout Apps
Lily's Garden and Hidden Hotel: Miami Mystery were both launched in the U.S. *less than three months ago* ... and are already averaging over $10K in daily U.S. revenue on iOS. Review this section to quickly understand the core mechanics behind the latest top grossing competition in Puzzle.

Market Watch
Candy Crush Saga released a daily challenge feature; Matchington Mansion released a bank event; and Candy Crush Soda Saga released a group missions feature. Review this section for a summary of the major features released this past month ... with all the features, events, and level mechanics now online in the Feature Database and Data Tool.

Make the dream a reality.

Brett Nowak
CEO

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APRIL

2019

REVENUE DRIVERS

PURCHASE EVENTS

Spring Bundle in Matchington Mansion

REVENUE ANALYSIS

Matchington Mansion's *Spring Bundle* event ran from 3/11 to 3/19, causing a +5% WoW increase in revenue (downloads were up 15% during that period). IAP packages associated with the event (*Apple, Cherry,* and *Cocoa Tree Bundles*) were among the top IAP transactions during the event.

Top IAP Transactions 3/18/19

Name	Price
Stack of Coins	$1.99
Bag of Coins	$4.99
Coin Piggy	$9.99
Coins on a Pillow	$19.99
Apple Tree Bundle	$1.99
Cherry Tree Bundle	$4.99
Stack of Coins	$1.99
Piggy Bank	$4.99
Cocoa Tree Bundle	$9.99
Good Neighbor Deal	$2.99
Duckling Deal	$4.99

Matchington Mansion
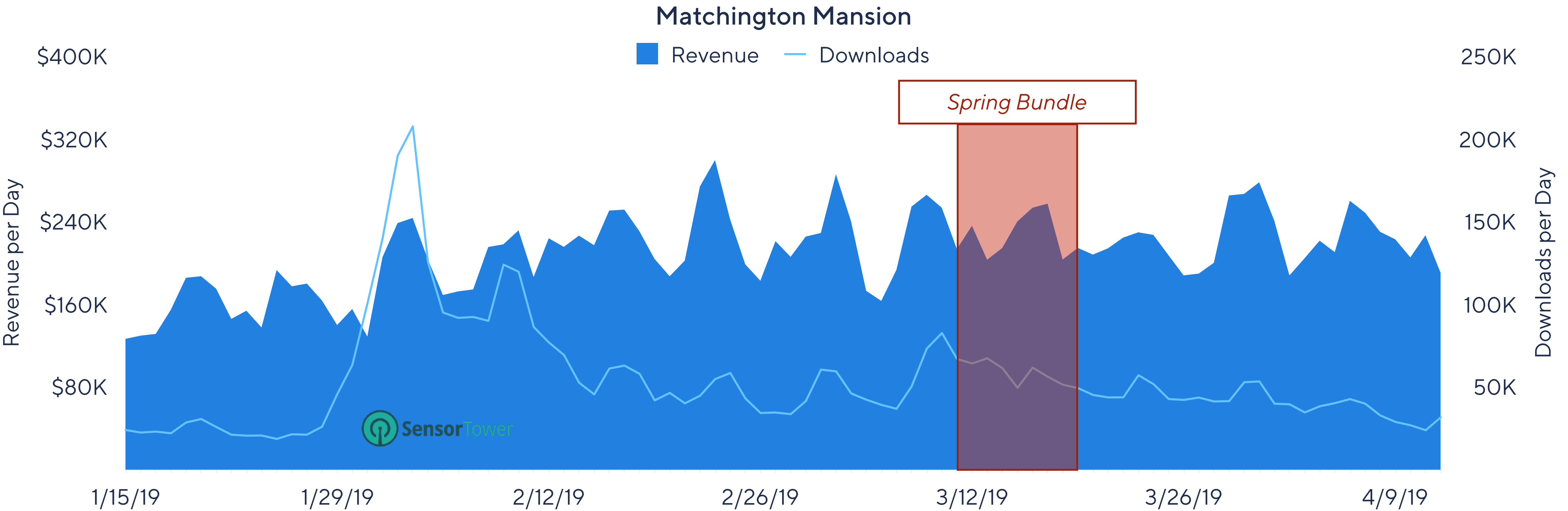
Graph data is iOS U.S. only
WoW = Week over week

TEARDOWN

During the event, certain sales bundles plant a *Tree* that grows as levels are completed. Once fully grown, *Trees* award coins and unlimited lives for a set amount of time.

Feature Details
- A sale was released with three bundles (1).
- Each bundle includes boosts, coins, and a *Seed* to plant a *Tree* (2).
- Once planted, players complete levels to water the *Tree* (3 & 4).
- Each *Tree* varies in water and awards (5).
  - *Apple:* water 8 times and receive 30 minutes of unlimited lives and 300 coins.
  - *Cherry:* water 12 times and receive 1 hour of unlimited lives and 500 coins.
  - *Cocoa:* water 28 times and receive 2 hours of unlimited lives and 1,500 coins.
- Players are limited to one of each *Tree* type at a time (6).

Report References
- Sales and Unlimited Lives Events in 1/19 Puzzle Report
- Bake Sale Events in 12/18 Puzzle Report
- Daily Streak Events in 3/18 Casino Report *(Casino access required)*
- Stamp Cards in 5/18 Casino Report

Related Features
- Valentine's Day Bundle – Matchington Mansion
- Special Offers & Unlimited Life Events – Angry Birds Match
- Classy Roses Color Bloom – myKonami Slots

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EXPERT INSIGHTS

After testing and tuning the economy impact of this mechanic during an event, consider releasing it as a more permanent feature to realize greater gains. To capture the full revenue potential, allow unlimited purchasing capabilities for *all* sales bundles.

Product Insights

- **Time duration of feature:** Test this mechanic as an event first to limit the economy exposure. Use the event release(s) to create the optimum cost/award ratio of each *Tree*. Then, release as a feature. For example, in FarmVille, a *Money Tree* feature ran for a year. It cost players cash … and after a year, gave players 2x the cash back, if fully collected (1).
- **Concurrent purchases:** Unless the feature has considerable risk, payers should be able to purchase unlimited amounts (either the same or different package). Designing limitations will reduce the revenue produced from heavy spenders … the group most influential on top line revenue. In comparison, players in Huuuge Casino can easily purchase many of the same or different *VIP* packages at once (2).
- **Wide range of price points:** Although this event was released to drive transactions with smaller package amounts, include a full range of price points to eliminate price–per–transaction deflation (and potentially a negative short–term revenue impact). Huuuge Casino's *VIP Tiers* also demonstrates how to include prices that range from $0.99 to $99.99 (2).

Target User Persona *(full report coming soon)*

- **Target player:** *Challenger Chris*
- **Core motivation:** Competence
- **Mental preference:** These players reported the highest preference for cognitive challenges (logical problem solving, in–depth understanding, and 'out of the box' thinking)
- Email me for more information on the L&G Puzzle Persona Report

Additional Information Online

- More images and videos of Spring Bundle in Matchington Mansion
- More images of Huuuge Casino's VIP Tiers
- Go online to see all the Purchase Events and Purchase Features in Puzzle
- Consider reviewing the Purchase Events and Purchase Features in Casino
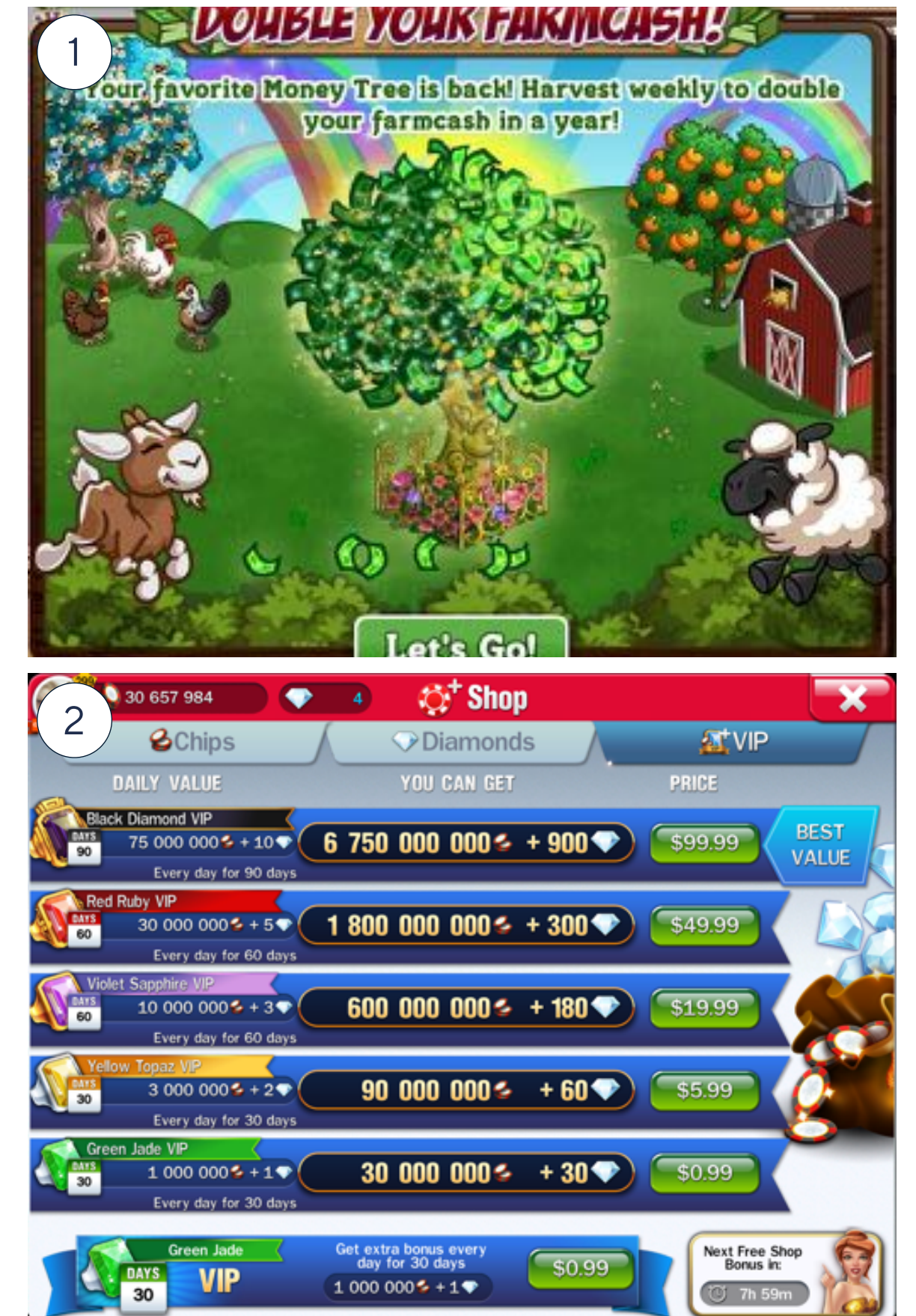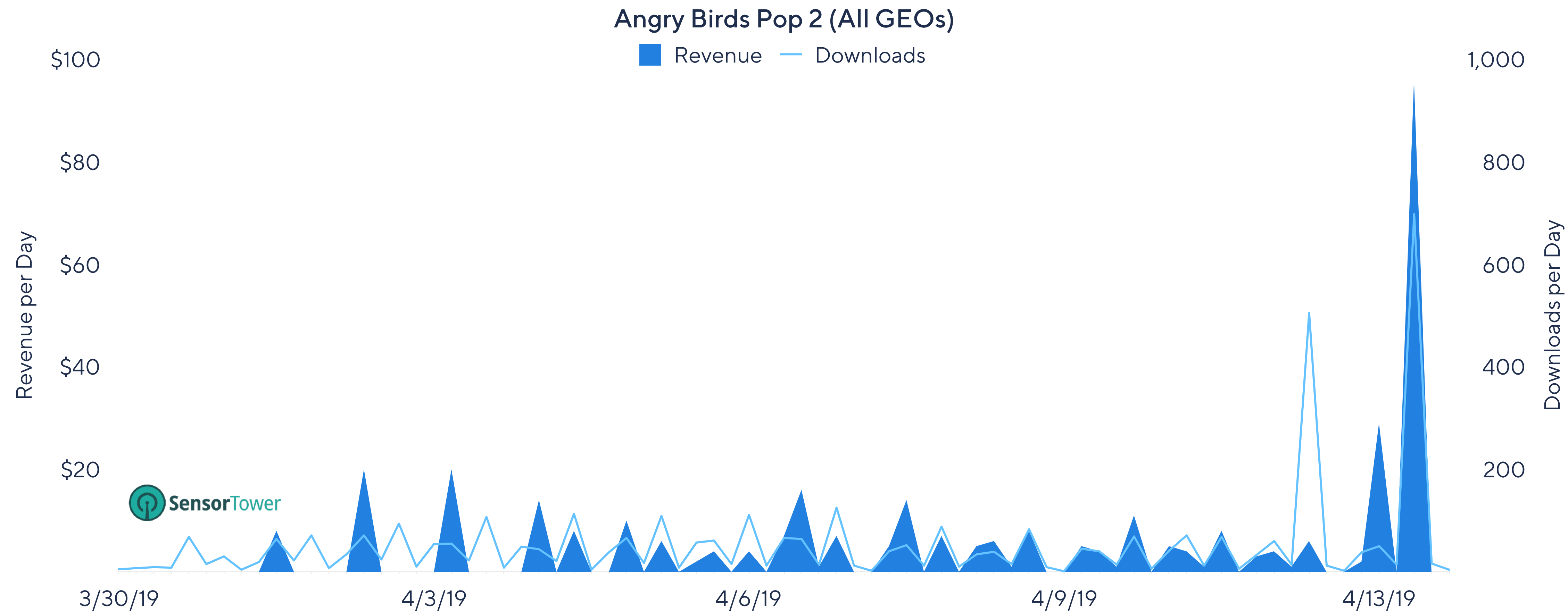
IN SOFT LAUNCH

ANGRY BIRDS POP 2
BY ROVIO

REVENUE ANALYSIS

Angry Birds Pop 2 is in soft launch ... live in Great Britain, Canada, Australia, Finland, Poland, and Sweden. Revenue is currently less than $100 per day.

Angry Birds Pop 2 (All GEOs)

■ Revenue — Downloads

TEARDOWN

In this bubble popper app, players collect and unlock *Characters* that have unique boosts. The boosts are charged and deployed during levels. Players unlock new *Characters* through the retention bonus.

Feature Details

- Players complete levels using bubble popper mechanics (1).
- The daily *Pinata* distributes rewards and *Characters* that require *Tokens* to unlock (2).
- *Tokens* are collected for passing levels and completing *Quests*.
- Once unlocked, each *Character* has boost abilities (3).
- Before each level, players select from available *Characters* to use for that level (4).
  - Players must pop bubbles of the *Character's* color to fill the *Character's* meter and activate its boost.
  - *Characters* appear to become more powerful after leveling up.

Additional Information Online

- New User Flow
- Quests (structured and coded as challenges according to our *Feature Taxonomy*)
- Collection
- Pinata
- Misc. Currency
- Misc. Features

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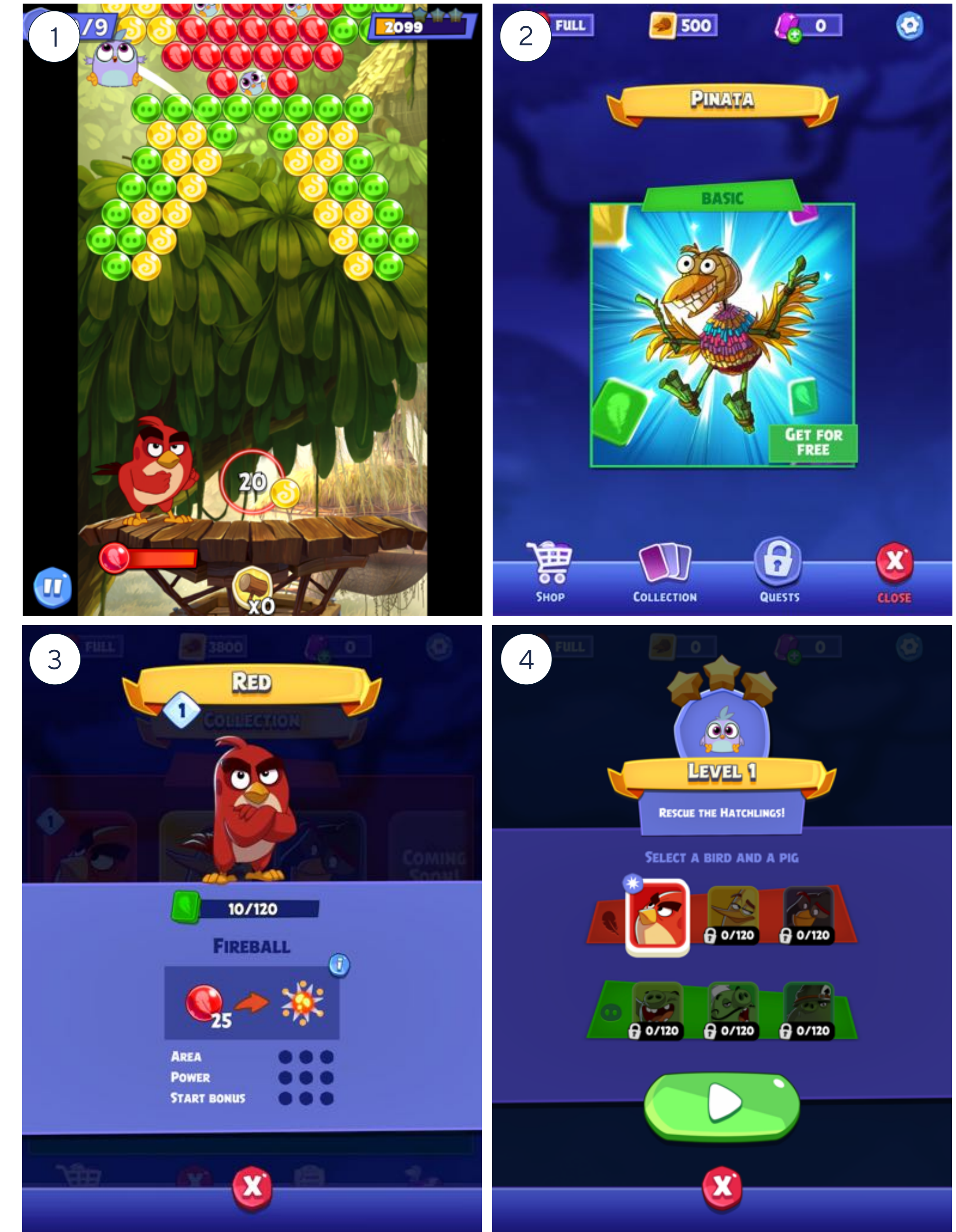
EXPERT INSIGHTS

Angry Birds Pop 2 will compete on core game play in the relatively smaller bubble popper sub-market ($2.8M monthly iOS revenue) ... and target players in the larger collections meta feature sub-market ($29.5M monthly iOS revenue)*.

Product Insights

- **Core game sub-market:** Bubble popper is the second-smallest sub-market when looking at only the top 30 grossing Puzzle iOS apps by monthly revenue (see Core Game Sub-Markets table below).
- **Differences in meta features:** All three bubble popper apps differ in the primary meta feature: Panda Pop is focused on competitions, Bubble Witch Saga 3 on custom designs, and Angry Birds 2 on collections (see Feature Matrix: Bubble Poppers table to the right).
- **Collections meta feature sub-market:** Collections is the second largest meta feature market at $29.5M (behind custom design at $43.7M ... and, similarly sized to competition at $27.5M and challenges at $23.7M). The apps that compete on collections are listed below in the Meta Feature: Collections table.

Target User Persona

- **Target player:** *Trainer Tracy*
- **Core motivation:** Regulation
- **Mental preference:** These players showed the highest preference for challenges of solving different types of puzzles

Core Game Sub-Markets

Match-Link	Match-Builder	Collapse	Other	Match-RPG	Word	Physics	Bubble Popper	Solitaire
$52.3M	$42.8M	$18.6M	$7.2M	$5.8M	$4.6M	$4.2M	$2.8M	$2.1M

Meta Feature: Collections

Merge Dragons	Fishdom	Dragon Ball Z	CC Friends	Farm Heroes	Cookie Jam	Best Fiends	Gummy Drop!	Candy Crush Jelly	Legendary: GoH	Puzzle & Dragons (EN)
$5.4M	$4.5M	$4.2M	$3.6M	$2.4M	$2.1M	$2.0M	$2.0M	$1.8M	$1.5M	$119.7K

* Revenue is iOS only from all GEOs and the sum of the top 30 grossing apps for 30 days

Feature Matrix: Bubble Poppers

| App	Panda Pop	Bubble Witch 3 Saga	Angry Birds Pop 2
Accelerator – Additional	Additional	Additional	Additional
Accelerator – Standard			
Added Levels (non-map)	X	X	
Bonus – Primary	X	X	X
Bonus – Secondary		X	X
Bonus – Tertiary			
Challenges	X	X	X
Chat			
Club			
Collections	X	X	X
Competitions	X	X	
Core Game	Bubble Popper	Bubble Popper	Bubble Popper
Custom Design	X	X	
Leaderboards (stand-alone)	X	X	
Leveling Feature	X	X	X
Leveling Progression	XP + Lvl w/Stars	Level w/Stars	Level w/Stars
Meta Feature	Competitions	Custom Designs	Collections
Modes	X	X	X
Multiple currencies		X	X
Piggy Bank (or event)		X	
Replayable Levels	X	X	X
Social Features (clubs, chat)			
Streak Feature		X	
Subscriptions			
Theme (IP/Non-IP)	Cartoon	Cartoon	Cartoon
VIP Rewards			
W2E (any kind)	X	X	
Publisher	Jam City	King	Rovio
Revenue	$1.4M	$1.4M	$0.0M
Feature Totals	12	16	9
Percentage of Features	40%	53%	30%

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BREAKOUT APPS

LILY'S GARDEN
BY TACTILE GAMES

REVENUE ANALYSIS

Lily's Garden was launched in the U.S. on 2/4/19 ... as of 4/12/19, it was averaging $11.7K in daily U.S. revenue on iOS.

Lily's Garden

■ Revenue — Downloads

Graph data is iOS U.S. only
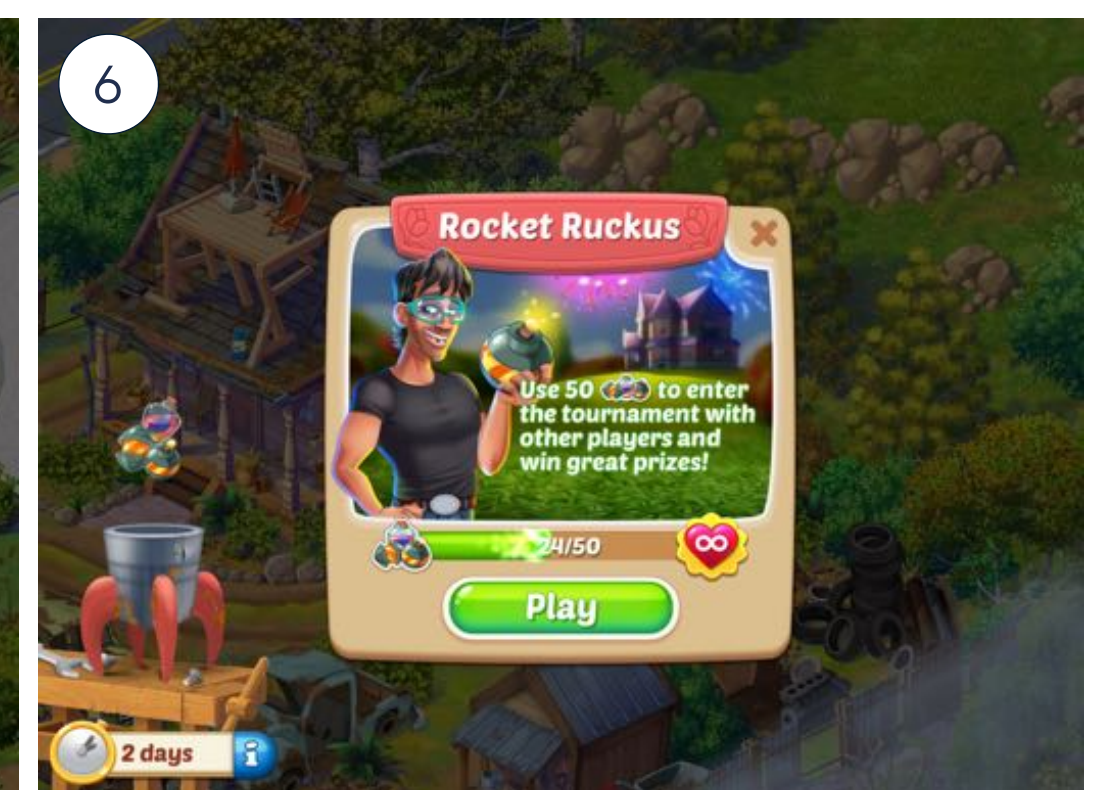
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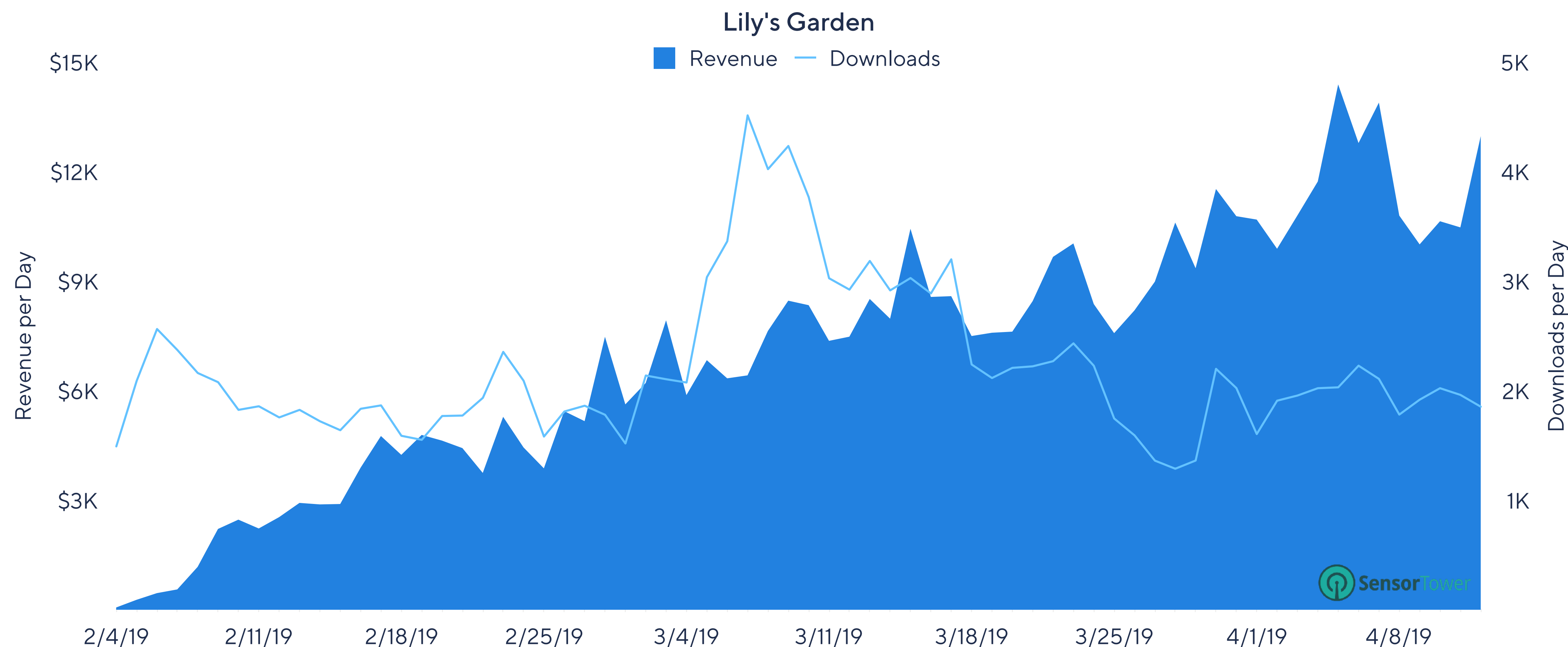
TEARDOWN

The app is a collapse–builder with an emotional storyline, custom design mechanics, leagues with both individual and group goals, and an active live ops system.

Feature Details

- The new user experience explains how *Lily* inherited her late Aunt's *House* (1).
- Players are then assigned tasks (2).
- To complete tasks, players must beat collapse mechanic levels to earn *Stars* (3).
- *Stars* are used to customize the rebuild of the *House* (4).
- Connecting to Facebook increases the max lives from four to five.
- In the league feature, participation in specific events determine a player's ranking on the leaderboard (5).
    - There are five league tiers with promotion and demotion zones.
    - There are also *Group Goals* for each tier.
- Live ops events include:
    - Level events > complete levels > fill the meter.
    - Streak events > complete consecutive levels.
   - League events > qualify > compete (6).

Additional Features

- New User Flow
- Misc. Features
- Misc. Currency

- Tasks
- Boosts
- Daily Harvest

- Leagues
- Squirrel Hoard
- Flower Gathering

- Rocket Ruckus
- Sunflower
- Hot Streak

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HIDDEN HOTEL: MIAMI MYSTERY BY WHALEAPP

REVENUE ANALYSIS

Hidden Hotel: Miami Mystery was launched in the U.S. on 2/21/19, and was averaging $10.1K in revenue daily the week ending 4/12/19. Revenue appears down from the peak in early April.

Hidden Hotel: Miami Mystery

■ Revenue — Downloads

Graph data is iOS U.S. only

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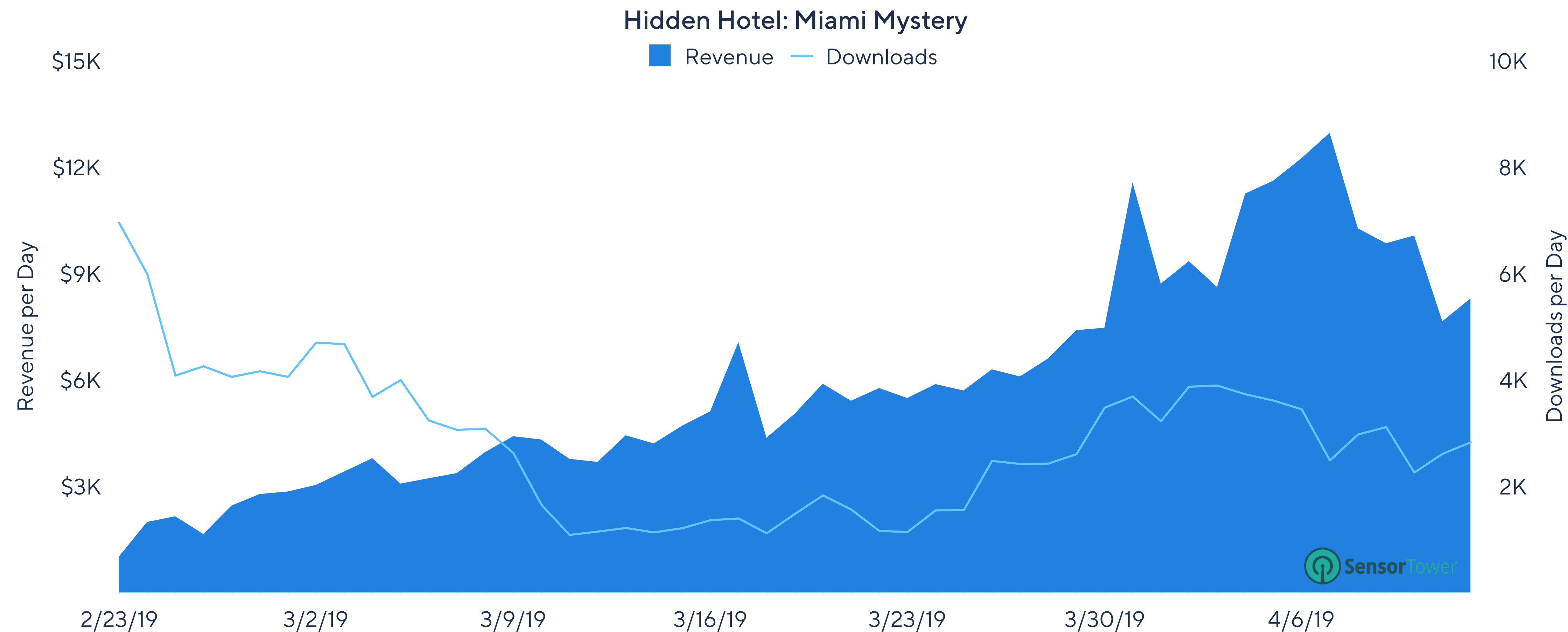
TEARDOWN

The app combines hidden object levels with custom design core game play. Players can join clubs to be social, and compete on a leaderboard in events. There is even an option to play a level in AR.

Feature Details

- Players complete tasks through hidden object levels (1).
- Attempting levels cost *Energy*.
- One *Energy* is awarded every two minutes.
- Completing levels awards *Stars* that can be spent to custom design the *Hotel* (2).
  - A coin multiplier is awarded for completing levels in a certain amount of time.
  - There is unlimited amount of time to complete levels.
- Clubs are unlocked at level five and include chat functionality (3).
- Players can spend *Energy* to play a level or feed their *Pet* in AR (4).
- As players progress, *Chargers* activate and complete collection sets (5).
- During a competitive event, players rank on a leaderboard based on the number of items collected in scenes (6).

Additional Features

- New User Flow
- Misc. Features
- Misc. Currency

- Tasks
- Modes
- AR / Diary

- Boosts
- Clubs
- Collections

- Daily Bonus
- Top Score Competition
- Watch to Earn

MARKET WATCH

3/1/19 – 3/31/19

NOTABLE RELEASES I

| App	Full Library	Key Mechanic	Description
Candy Crush Saga	Daily Win	Collecting Stamp	Players collect a *Sticker* for passing a level each day. Players receive a *Chest* reward after collecting six *Stickers*.
Matchington Mansion	Piggy Bank	Filling Piggy Bank	For each coin earned, 10x that amount is saved to the *Piggy Bank,* which is unlocked with a purchase (1).
Candy Crush Soda Saga	Mr. Toffee's Fair	Tutorial	A random group of three players select challenges out of 16 on a board. When a row or column is checked, each player receives a prize (2).
Angry Birds 2	Extra Bird: Bubbles	Bubbles' Ability	Collecting orange *Feathers* unlocks the new *Bird, Bubbles ...* before the *Bird* is released to all players (3).
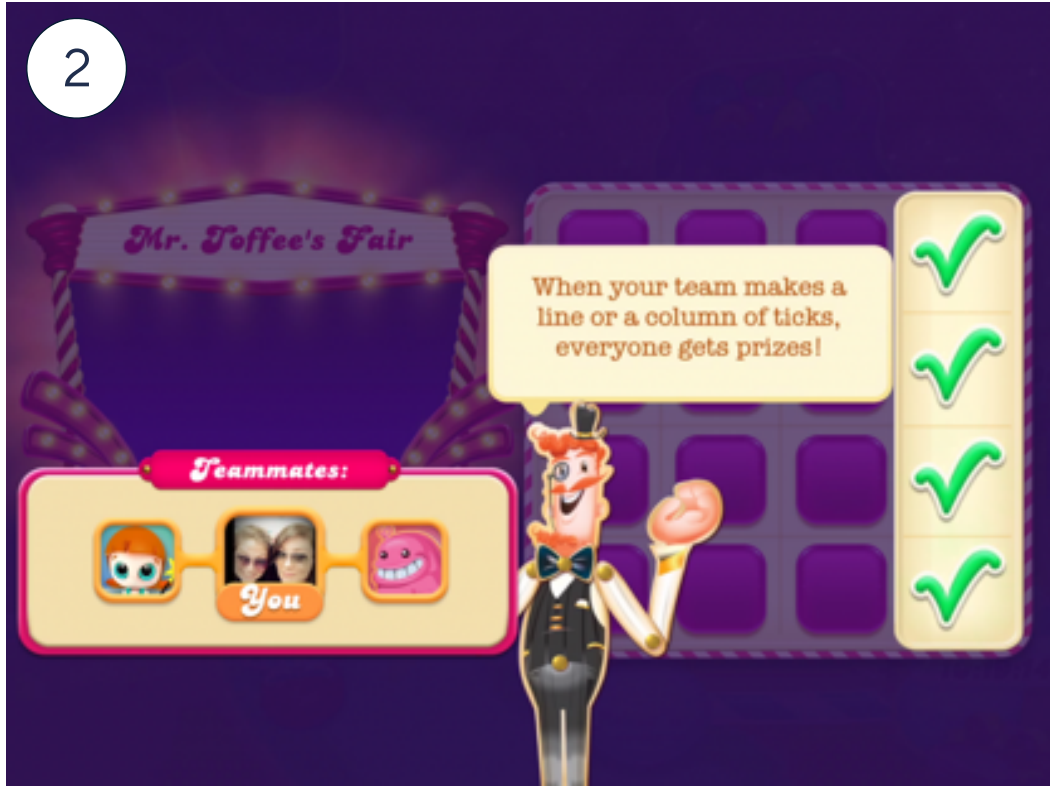
NOTABLE RELEASES II

App	Full Library	Key Mechanic	Description
Solitaire TriPeaks	Star Bonus	Star Bonus Rewards	Players earn *Stars* > fill the *Star* bonus meter > unlock *Chests*.
Home Design Makeover	DIY Restoration	Customizing Restoration	Players collect *Stars* by completing levels to restore items in the *DIY Collection*. Restoration projects give players a 360 degree viewing option (1).
Panda Pop	Crown Crush	Take the Crown	Players compete against a random player to finish specific levels with more remaining moves (2).
Cookie Jam	Crown Race	Leaderboard	Players scale a leaderboard based on points earned by completing levels. Points earned scale based on the number of tries a player takes to complete each level (3).
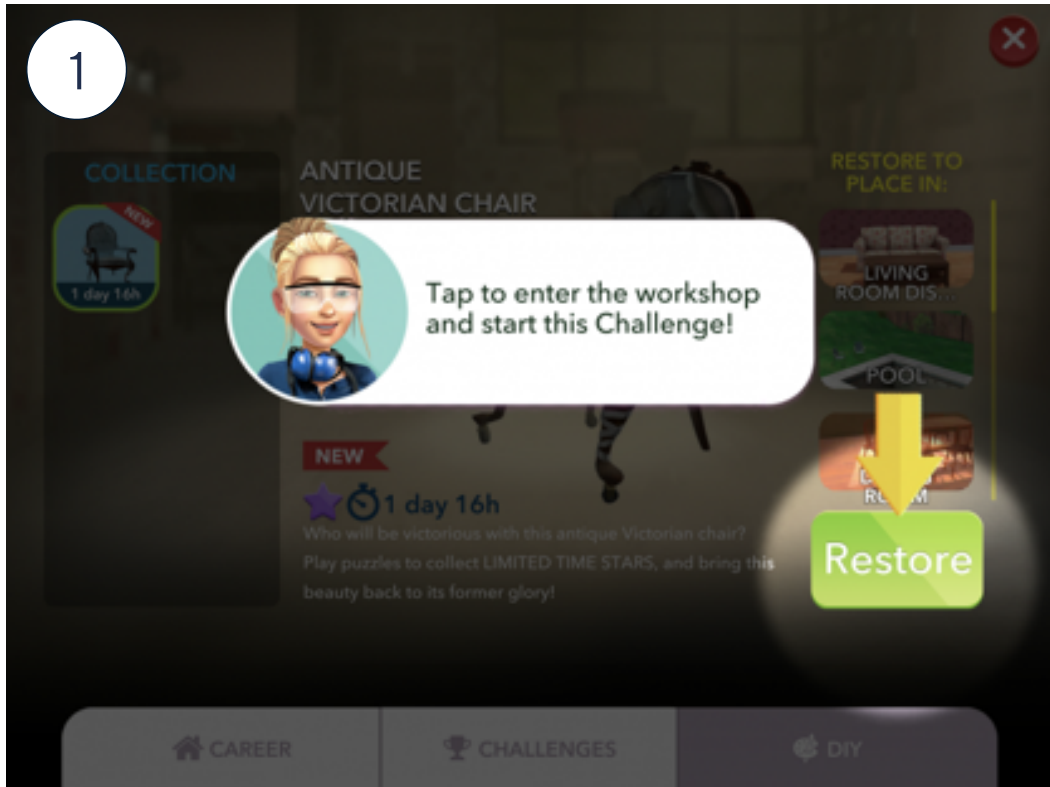
NOTABLE RELEASES III

App	Full Library	Key Mechanic	Description
Bubble Witch Saga 3	Magic Hats	Hat Collection	Players pop *Bubbles* to release and collect *Magic Hats*. Each *Hat* has a unique power that is measured with a power meter (1).
Lost Island Blast Adventure	Totem Challenge	Totem Assembly	Players complete levels > fill a tiered meter > receive lives (2).
Wizard of Oz Magic Match	Marvelous Mysteries	Collection Tutorial	Players beat select levels > earn *Cards* > complete a *Deck* > for rewards, and a *Fortune* reading.
Angry Birds Match	Bingo Blast	Bingo Mini-game	Players collect *Seashells* containing *Pearls* by passing levels or purchasing them with *Rubies*. Players then try to complete Bingo patterns (3).
All Features Released			
Review all features and events released in the *new* Data Tool by filtering 'Year' and 'Month'			

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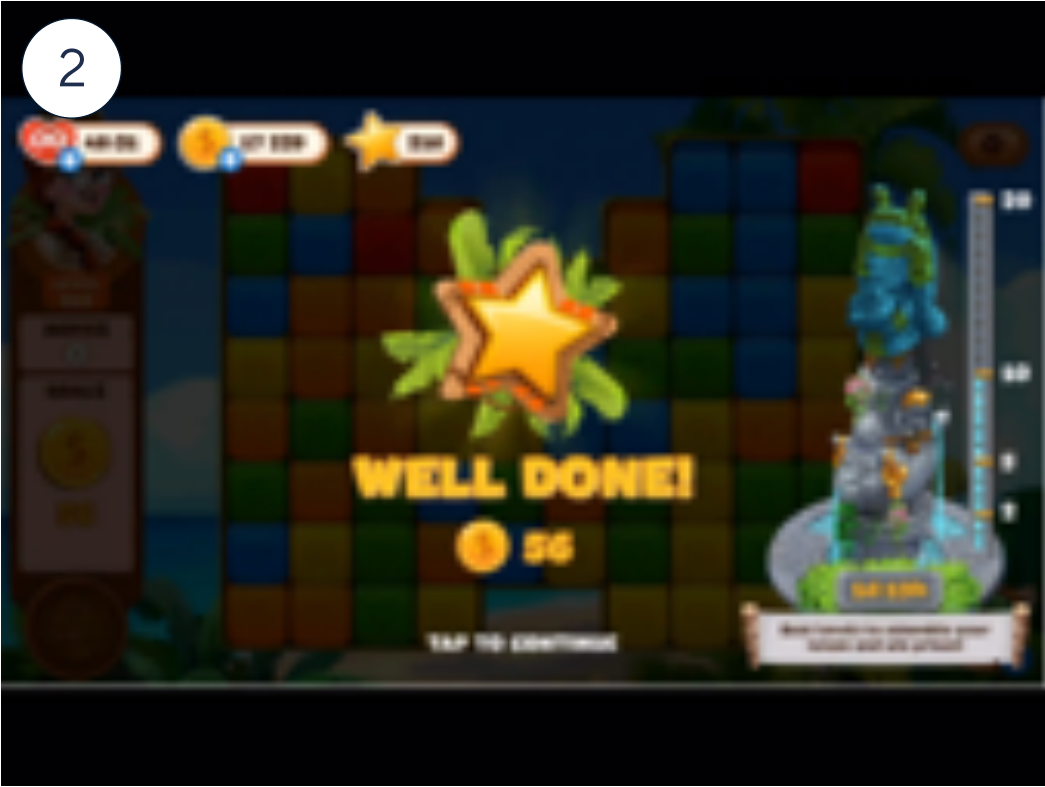
APPENDIX

PREMIUM PARTNERSHIPS

Liquid and 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	**Player Personas**	**Mobile App Store Intelligence**
Quadrant Strategies website	Kinrate Analytics website	Sensor Tower website

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 of 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 PRODUCT COUNCIL

These industry-leading puzzle experts strengthen the Product Council Insight sections included in each Puzzle Report.

Helen Grabarchuk	Ryan Winterholler	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 in dozens of iOS and Kindle apps.

Helen's comments can be found predominately in the Level Mechanics section.

President at Winterholler Enterprises Inc.
LinkedIn Profile

Ryan is a mobile games veteran with over 17 years of experience.

For the past 15 years, his focus has been managing the creation, production, and design for multiple award-winning mobile games and apps.

His last few credits include Frozen Free Fall, Maleficent Free Fall, NBA Jam, Tiger Woods PGA Tour, NBA Live/Elite, DuckTales Scrooge's Loot, and many more.

Consultant in Mobile Gaming and F2P Systems, Monetisation, and Events
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 Consultancy.

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 an Apple's Editor's Choice Award and scaled the charts to the No. 1 game position in most major markets.

"You can design and create, and build the most wonderful place in the world. But it takes people to make the dream a reality."

– Walt Disney

LiquidandGrit.com

Brett.Nowak@LiquidandGrit.com