



Puzzle Report

Competitive Research and Actionable Product Recommendations

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NOVEMBER

2018

PAYER INSIGHTS



Best Fiends

BEST FIENDS PAYERS: SUMMARY

Liquid and Grit partnered with Quadrant Strategies, a market research strategy company, to conduct in-depth interviews on Best Fiends lite payers. This Report presents unbiased, expert-level insights into spending motivations for players in Best Fiends

Executive Summary

- The core motivation for lite payers to spend in Best Fiends is advancing through the primary level path ([see details here](#))
- Lite payers appreciate feeling in *control* ... a factor that leads to purchases ([see details here](#))
- Payers are attracted to the *familiar feeling* to Candy Crush, but appreciate the more colorful, fun, artistic, and addictive qualities of Best Fiends ([see details here](#))
- All payers interviewed are *competitive with themselves*. At times, a few are competitive with others (often their friends who also play Best Fiends)
- Best Fiends serves as an integral part of their *relaxation rituals* and *entertainment*
- None of the lite payers kept track of how much they were spending

For deeper analysis and details on the payer interviews, see the pages included in the [Appendix](#). To find out more about [Quadrant Strategies](#), which advises some of the most prominent companies in the world, please email [Scott Siff](#), a founding partner



What gets you to start spending:

"I'll start spending if I'm stuck on a level and I can't get past it, I'll buy a little extra help."

- Dana, female, 38 years old, \$20 per month average spend on Best Fiends

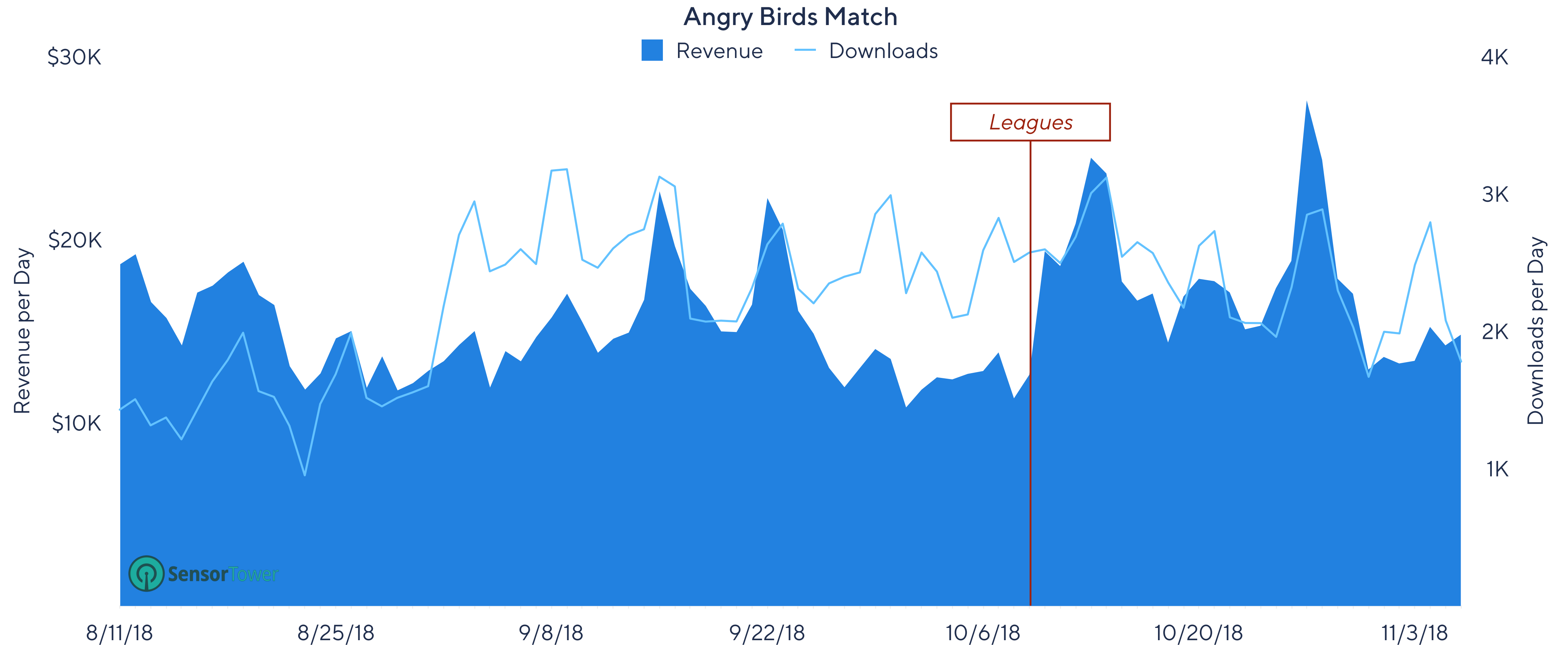
REVENUE DRIVERS



LEAGUES

IMPACT ANALYSIS

Angry Birds Match revenue increased 39% 2Wo2W after the release of *Leagues*. Downloads were flat during that same time period



INSIGHTS & ADVICE

Positioning players against others with relatively similar engagement and skill is key to increasing feature-driven spend. Rank players with a feature-based system that rewards both effort and skill ... if you do not have a powerful back-end system

Feature Details

- The *Leagues* have nine *Tiers* for players L13 and above (1)
- *Tiers* have *Promotion* and *Demotion* zones, which vary per *Tier* (2)
- Rank is based on *Gold Feathers* earned during play, level rewards, and *Outfit Bonuses* (3 & 4)
- All players earn a participation reward, and leaderboard *Chests* scale with rankings (5)

Product Council: Key Takeaways*

- Lite payers are *competitive* ... but mostly with themselves. Other *League* players serve as a progression metric ... so pairing players with similar competition is a key component of this feature
- To rank players, use an engagement-based system that scales by level. Like ABM, use *Feathers*, which are collected by activating *Boosters*. But also reward skill by increasing the output of the *Feathers* at higher levels
- Upon releasing major features, award unlimited lives to 1) increase engagement in the new feature, and 2) limit cannibalization of engagement in existing features
- Display potential payouts and items in *Chests* to 1) decrease possible disappointment with less-valuable *Chests*, 2) invest in the health of mobile gaming (see [this article](#) as justification), and 3) match the *new* industry standard (see Disney Emoji Blitz [Hits Box](#) and Angry Birds 2 [Continue Card Pick](#) as examples)



“The social element also ties in with us competing against each other, obviously in a ... social, healthy way ... but it does get you talking in a nerdy way ... [My friend will] message me and say, ‘I can’t get past this level’.”

– Melanie, female, 29 years old, \$20 per month average spend on Best Fiends



More images of *Leagues*

* The Product Council is comprised of top Puzzle consultants in mobile gaming (more info in the [Appendix](#))

FEATURE REFERENCES

Wizard of Oz Magic Match released *Leagues* that drove an increase in revenue. For live op events post-*Leagues* release, see *Bumper Crops*. This event drove a 25% WoW increase in revenue for Gardenscapes

Details on *Leagues*

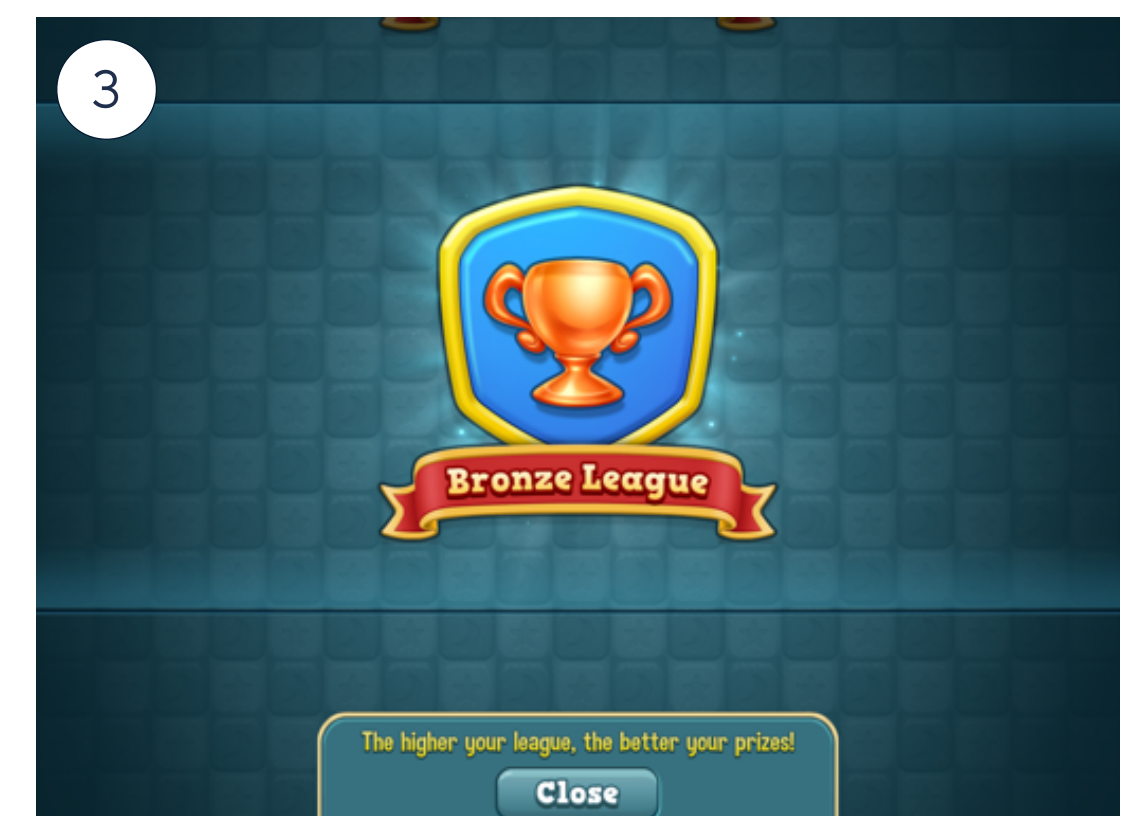
- Release Date: 10/10/18
- Motivations: Achieve
- Personas: *Stealthy Steve*, *Daring Dan*

Report References

- [Leagues](#) in Wizard of Oz Magic Match (4/18)
- [Team Collection Events](#) in Gardenscapes (10/18)

Related Features

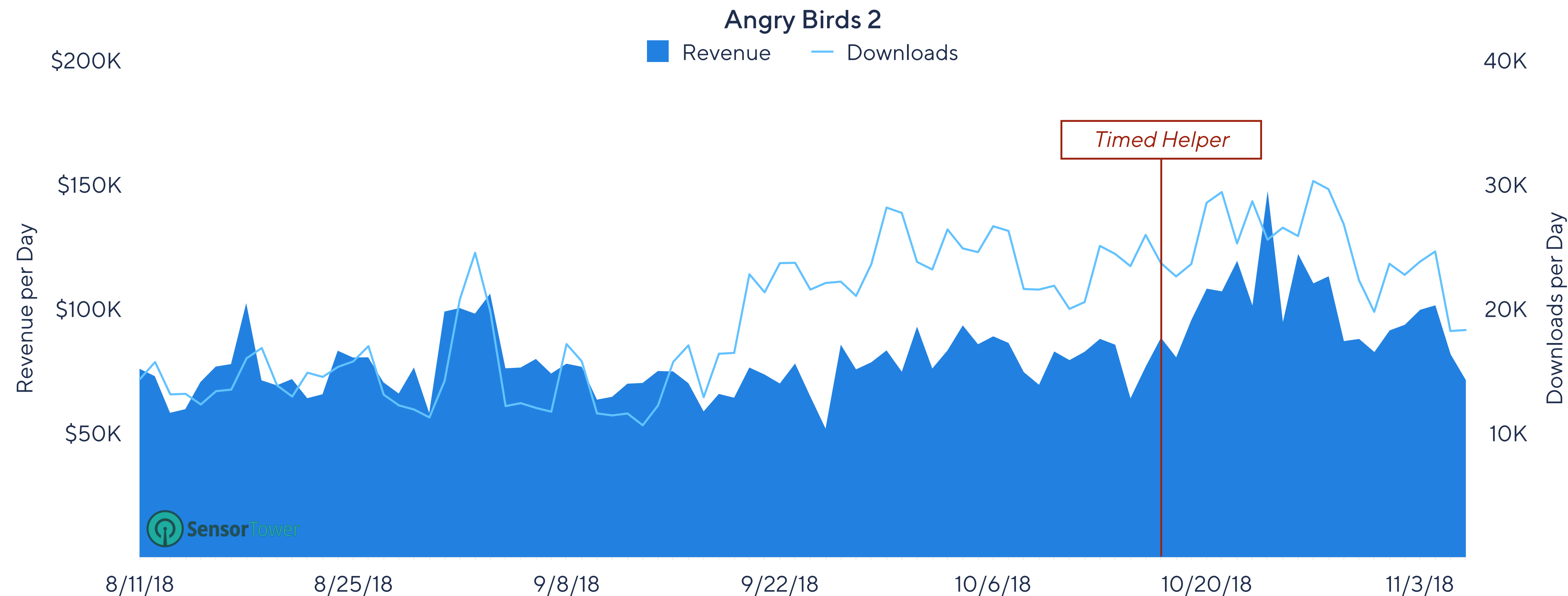
- [Leagues](#) - Wizard of Oz Magic Match (1)
- [Leagues](#) - Gardenscapes (2)
- [Leagues](#) - Toy Blast (3)



TIMED HELPERS

IMPACT ANALYSIS

Angry Birds 2 revenue climbed 27% 2Wo2W after content was released allowing players to tackle levels with a *Timed Helper* character ... at certain times of the day. Downloads were up 10% during that same time period ... also contributing to the revenue growth



INSIGHTS & ADVICE

Combine a timer mechanic with a level-competition *Booster* to drive retention. Then, release a sale to give a sense of control to payers ... and let them more easily and quickly unlock the *Timed Helper*

Feature Details

- *Extra Birds* are an additional *Bird* available for the level *Roster* (1)
- The *Extra Bird* is unlocked by collecting a certain color *Feather*. Typically, *Birds* are unlocked by collecting *Keys* (2)
- *Extra Birds* are also upgraded by *Feathers* of a *Bird's* specific color (3)
- A sale was released with a pink *Feathers* gift for purchasing all three offers (4)
- *Extra Birds* are available to use for four hours. Then, they become inactive for 10.5 hours (while sleeping). Players can activate them anytime by spending *Gems* (5)

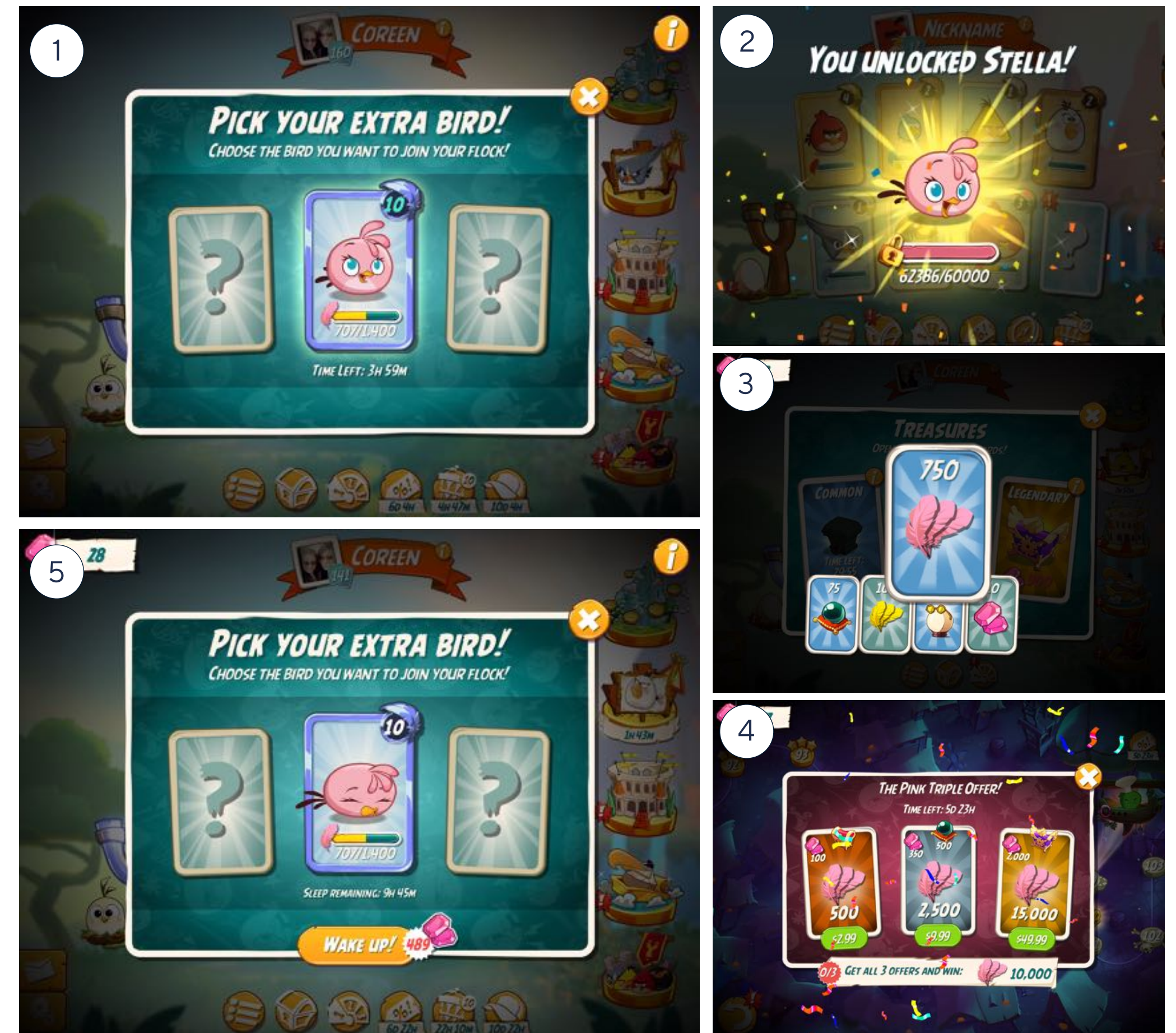
Product Council: Key Takeaways

- Consider making the *Helper* unlock with shorter-timed intervals, like active for one hour ... inactive for four hours, to drive more engagement throughout the day
- Test with time-limited events to decrease the risk of the making the game too easy
- The time limit also incentivizes making a purchase-to-unlock because the sooner the *Timed Helper* is unlocked ... the more benefit to the player
- Try allowing all players to experience the *Timed Helper* for free before locking it. Then, like *Angry Birds 2*, set an engagement (or purchase-to-unlock) system onto the *Timed Helper* to make players either increase their engagement or spend



What causes you to start spending?

"Sometimes it's curiosity, there's this game called Episode, essentially what it is is creating your own plot and different twists for your own soap opera. In order for me to want the episode to go a certain way, I'd have to make purchases for it to become the way that I want it to be, and continue on from there." - Melanie



More images of *Extra Birds*

FEATURE REFERENCES

Candy Crush Friends Saga is built around collecting *Friends* that have specific skills, similar to the *Timed Helper* feature in Angry Birds 2

Details on *Timed Helpers*

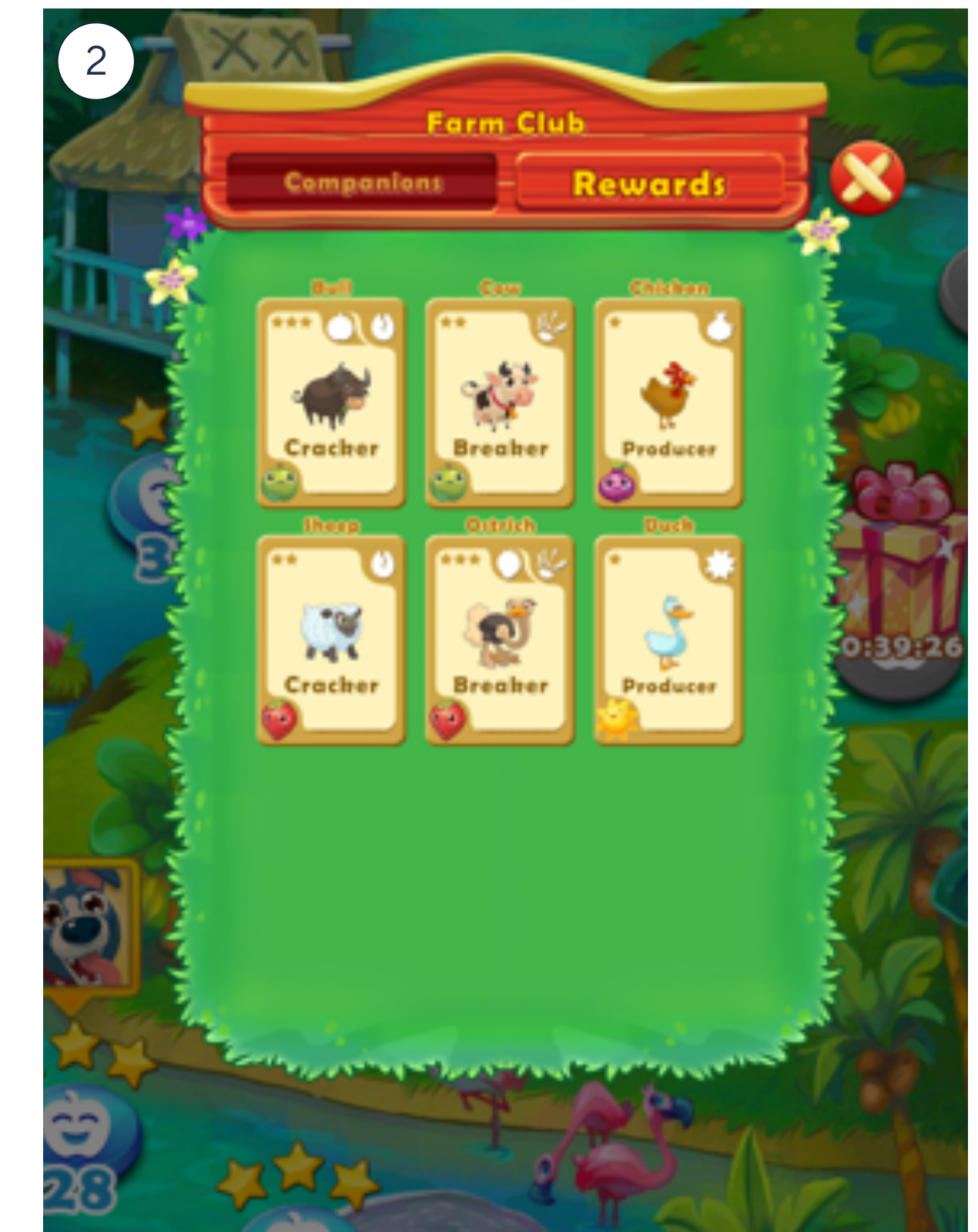
- Release Date: 10/19/18
- Motivations: Ownership, Achievement
- Personas: *Friendly Fran*, *Adventuring Adrian*, *Prospecting Polly*

Report References

- [Team Collection Events](#) in Gardenscapes (10/18)
- [Exclusive Content Challenges](#) in Disney Emoji Blitz (7/18)

Related Features

- [Character Collection](#) - Candy Crush Friends Saga (1)
- [Farm Club](#) - Farm Heroes Saga (2)



REMOVED FEATURES



BOOST REDUCTION

Cookie Jam removed some *Boosters* and *In-Game Boosters* that were exchanged for coins

Feature Details

- *Boosters* are activated before a level. *In-Game Boosters* are used during a level (1 & 2)
- These *Boosters* were removed from the game and replaced with *Coins*: (3)
 - *Whipped Cream*: removes any five adjacent pieces from the board
 - *Color Breaker*: removes all pieces of a chosen color from the board
 - *Timer*: increases number of remaining moves
 - *Cherry Bomb*: activates all *Boosters* on the board
 - *Cookie Jar Booster*: reshuffles the board

Product Council: Key Takeaways

- When removing features, soften the negative backlash with a generous exchange to currency
- Positively-market the removal by using a theme, like 'replacing stale items'
- Ideally, let players remove *Boosters* themselves ... or, automatically hide unused *Boosters* to increase the simplicity of the game
- Too many *Boosters* can have a negative impact on monetization with the [Paradox of Choice](#)
- Add a description of the functionality when activated, similar to Toon Blast, to eliminate confusion



Images and videos of original release

Images and videos of removal

LEVEL MECHANICS



NEW LEVEL DESIGNS I

Washing Machine in Toon Blast (1 & 2)

- *Washing Machines* are removed from the board by five adjacent collapse or *Boost* activations. Upon removal, *Washing Machines* randomly place *Bubbles* across the board

Design Expert Insights

- This is not a new level mechanic, but a powerful one compared to other usages as it covers a 4x4 area after activation. This mechanic 1) creates nice visual forms at the beginning of the level, and 2) allows complexity to be added to levels



Dirt in Toy Blast (3 & 4)

- *Bombs* rest in *Dirt* and contain a timer ... which counts down by one each collapse a player makes of the *Bomb's* color. *Bombs* explode when the counter reaches zero, removing *Dirt* and uncovering additional play area

Design Expert Insights

- Use this mechanic to generate subgoals in the level. When these subgoals are reached, remove the *Dirt* to uncover hidden treasures
- This mechanic works well because it 1) has intuitive visuals, 2) breaks harder levels into smaller, more attainable goals with intermittent rewards, and 3) slows down progress
- Although several other games utilize this mechanic ... the different colors in Toy Blast gives designers a possibility to have more separate area covered with *Dirt*



NEW LEVEL DESIGNS II

Cobwebs in Homescapes (1 & 2)

- *Cobwebs* prevent players from moving pieces and are only removed by *Boost* activation. Color matches, including a trapped piece, removes it ... allowing another element to cascade into the *Cobweb*

Puzzles in Homescapes (3 & 4)

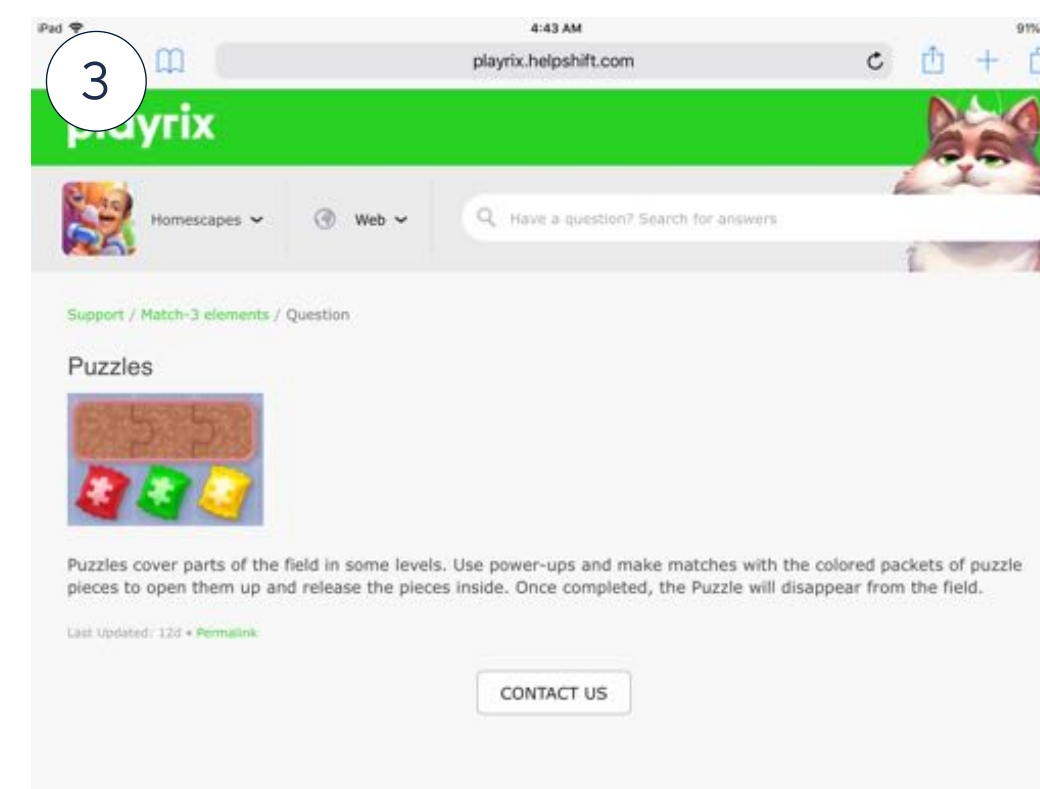
- *Puzzle Packets* hold *Puzzle Pieces* and are opened by color matches and *Boost* activations. Once *Packets* open, *Pieces* fill positions of a *Puzzle* hazard on the board, which is removed when completed

Cannon in Fishdom (5 & 6)

- Three adjacent matches or *Boost* activations charge and fire a *Cannon*, shooting elements needed for level goals across the board

Design Expert Insights

- *Cannons* are a pleasant mechanic with a common mechanism of activation
- Because the *Cannon* remains on the board, do not block the flow of the tiles (especially if they are placed in a group)
- This hazard can be used to 1) create hard levels by placing the *Cannon* on separated areas to be activated only by *Supers* ... or, by positioning them in hard-to-reach areas, like dents or holes, or 2) design easy or medium levels by adding more *Cannons* in well accessible places
- A possible improvement would be to display the number of matches needed to activate the *Cannon* ... and the number of items that would be shot



NEW LEVEL DESIGNS III

Colored Boards in Home Design Makeover (1 & 2)

- Adjacent color matches and *Boosts* remove *Colored Boards*, collecting them for level goals

Reusable Dynamite in Best Fiends (3 & 4)

- *Dynamite* detonates when a separate *Detonator* element is activated by multiple adjacent link-matches or *Boosts*. *Reusable Dynamite* does not disappear after detonation and has unlimited uses

Soap Bubbles in Bubble Witch Saga 3

- Players can aim and shoot through *Soap Bubbles* to pop and remove them from the level

Ghosts in Matchington Mansion (5 & 6)

- *Ghosts* move up one position every move and are removed by including them in color matches, or with *Boost* activation. In some levels, pieces transform into *Ghosts* after cascading onto the board

Cauldrons in Matchington Mansion

- Adjacent matches or *Boost* activations fill *Cauldrons*. Once full, *Cauldrons* release purple pieces across the board



NEW LEVEL DESIGNS IV

Gravestones & Bats in Matchington Mansion

- *Gravestones* release *Bats* with adjacent matches or *Boost* activations, immediately collecting *Bats* for level goals

Jack O'Lanterns in Matchington Mansion

- *Jack O'Lanterns* are lit by adjacent matches or *Boost* activations. When all *Jack O'Lanterns* are lit, they are removed from the board

Double Rainbow in Family Guy AFMG (1 & 2)

- Any swap with an adjacent piece activates a *Double Rainbow Boost*, destroying all pieces and the top layer of elements on the board

Treat Boxes in Angry Birds Match (3 & 4)

- *Treat Boxes* are opened by adjacent matches or *Boost* activations to reveal a *Cupcake*. An additional adjacent match or *Boost* activation removes a *Treat Box* from the board, collecting the *Cupcake*

Ice Blocks in Angry Birds Match

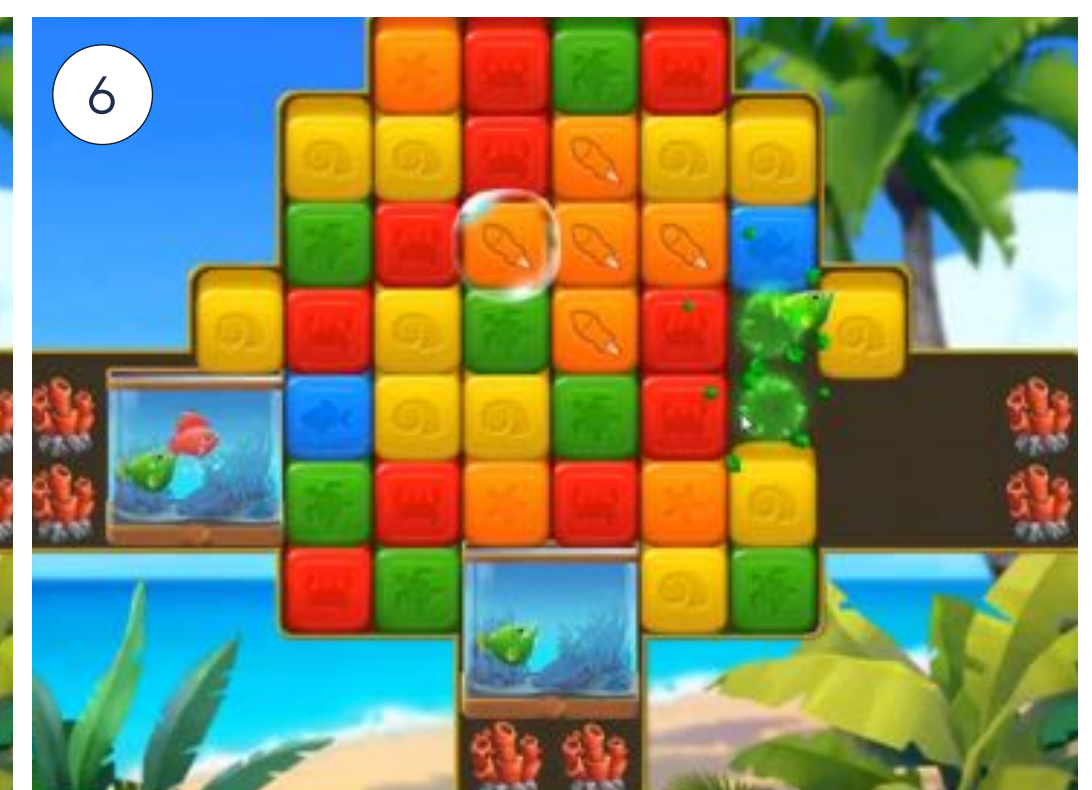
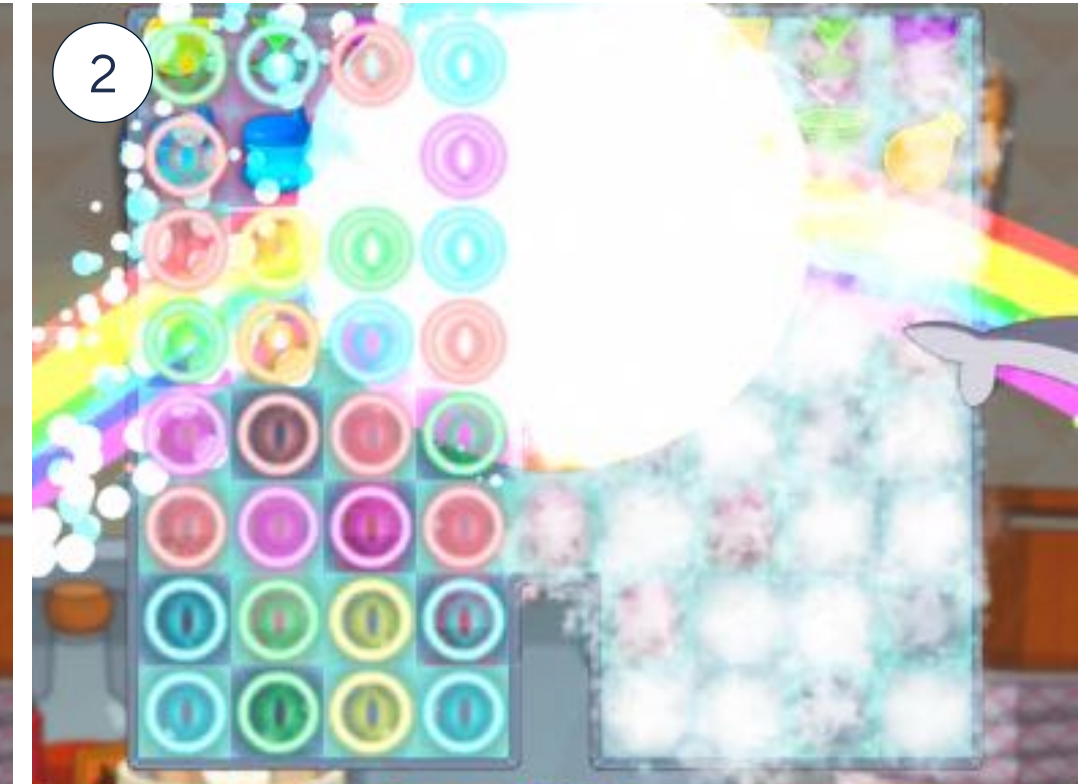
- *Ice Blocks* hold frozen pieces and are broken and removed by *Boosts*, adjacent matches, or color matches ... including trapped pieces

Aquarium in Lost Island Blast Adventure (5 & 6)

- The *Aquarium* contains a number of colored *Fish*, which are collected by *Boost* activation or same color matches adjacent to the *Aquarium*. After all *Fish* are removed, the *Aquarium* is removed from the board

Octopus in Lost Island Blast Adventure

- *Octopuses* are immobile hazards, which hold elements or pieces. Adjacent matches or *Boost* remove *Octopuses*, releasing the held element or piece to move normally



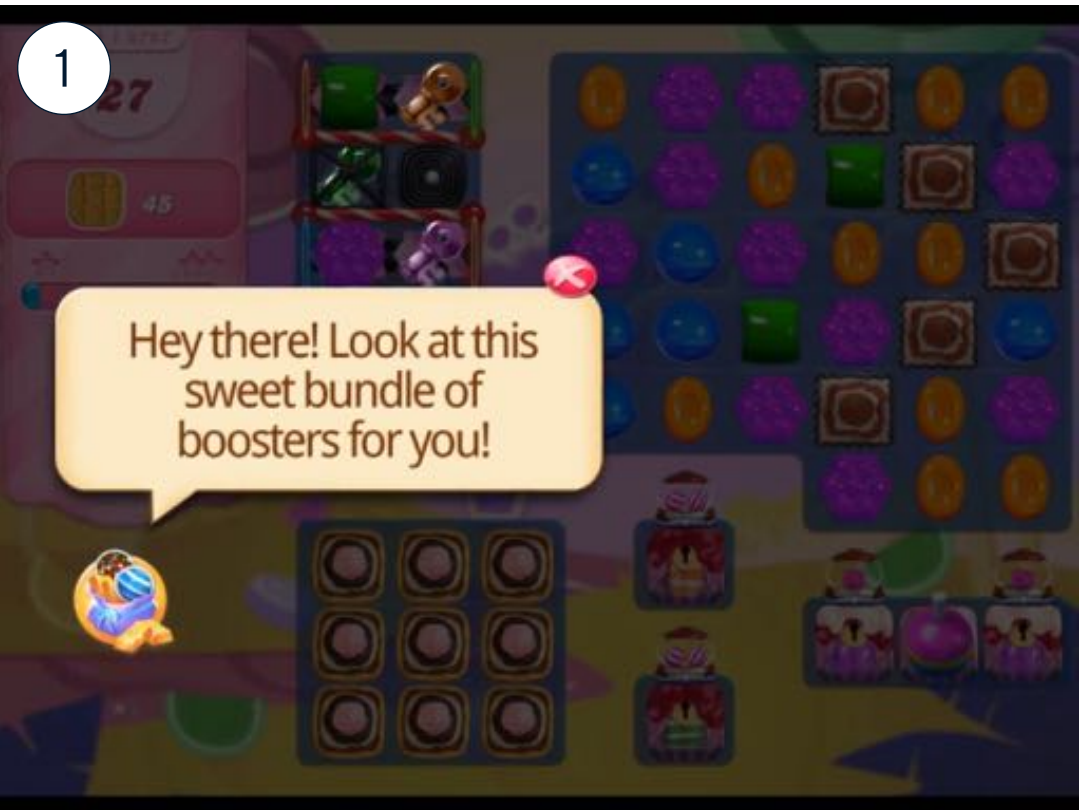
MARKET WATCH



10/1/18 – 10/31/18

NOTABLE RELEASES I

App	Feature	Description
Candy Crush Saga	Sweet Booster Bundle	(In Testing) <i>Boost</i> bundle offers appear during play (1)
Angry Birds 2	Extra Birds	Players can add <i>Extra Birds</i> for four hours after 10.5 hours of 'sleeping' inactivity. Player can wake birds early with <i>Gems</i> (2)
Solitaire TriPeaks	Club Tournaments	A tiered <i>Leagues</i> system for <i>Clubs</i> based on <i>Club Points</i> (3)
Cookie Jam	Pets	Players unlock upgradable <i>Pets</i> with <i>Pet Gift Boxes</i> , which are awarded for completing levels



NOTABLE RELEASES II

App	Feature	Description
Bubble Witch 3 Saga	AR Spell Battle	End of episode feature allows players with Augmented-Reality (3D) devices to play a virtual reality mini-game against the level's boss (1)
Bubble Witch 3 Saga	Moon Chase	Three round PvP tournament based on <i>Stars</i> collected awards <i>Boosts</i> and a chance to help design a game character
Wizard of Oz Magic Match	Match Rewards	(Coming Soon) VIP rewards system with tiers (2)
Matchington Mansion	It's Halloween	Players beat event map levels for special decoration rewards. Each level episode features a new level design element (3)

[Click here for a full list of content released this month](#)



APPENDIX



BEST FIENDS PAYERS: LEVELING UP

In Best Fiends, the primary motivation driving payer spend is getting to the next level

Interview snippets from Lite Payers

- *What gets you invested in a game?*
 - “The idea of getting onto the next level, and the next level. And in some games you earn certain prizes or certain privileges. So that would definitely get me addicted.” – Melanie
- *What got you spending on Best Fiends:*
 - “I wanted to get to level 16.” – Randall

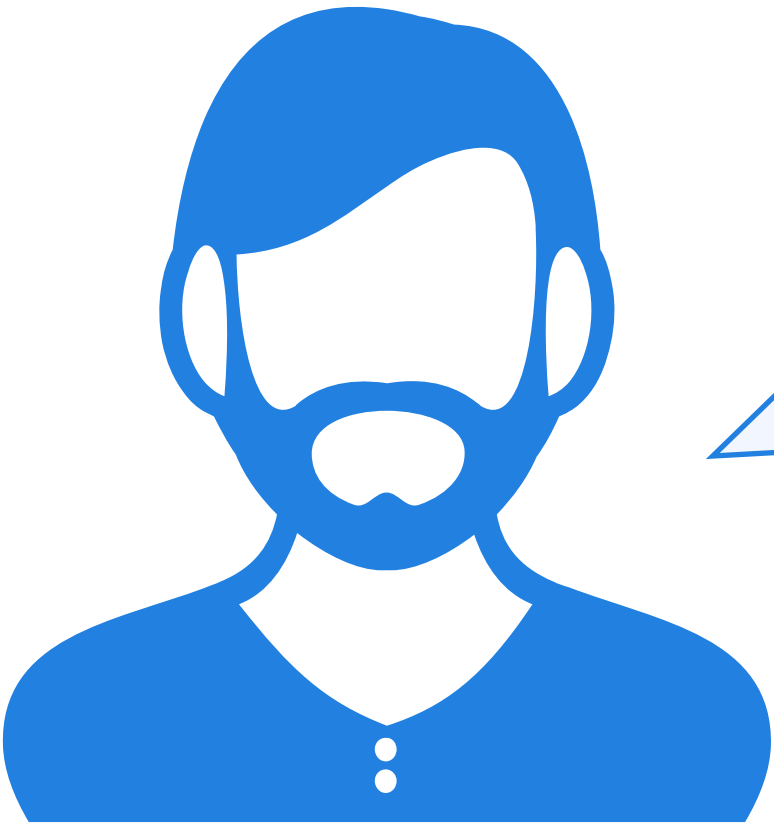


What gets you to start spending:
“I’ll start spending if I’m stuck on a level and I can’t get past it, I’ll buy a little extra help.” – Dana

Name	Gender	Age	Self Description	Free Time Activities	Spend per Month on Best Fiends	Other games
Dana	Female	38	Creative, outgoing, ambitious, a reliable friend, playful, likes to be a mother	Likes to travel, shopping, reading, writing poems, playing video games, surfing the web, anything technology driven	~\$20 / month	Candy Crush, Subway Surfers, Words with Friends, Family Feud

BEST FIENDS PAYERS: A SENSE OF CONTROL

Users appreciate **control**. A paid option to level up or get other features gives them more control over their game future, lets them save time, bypass frustration, and satiate their curiosity. Payers feel a sense of control in Best Fiends with more options to match different *Leaves* and trigger different *Fiends*



What gets you to start spending:
“When I start playing a game and get interested, and get deep into the game and want to see what the next level has, let’s say I’m on level nine and I’m like wow ... this is really good, if I have to pay to go to level 10, I’m automatically like, ‘Ok, this is intriguing...’ It’s curiosity, I’m curious to see what the next level has.”
– Randall

Interview snippets from Lite Payers

- *What prompted you to start playing Best Fiends frequently?*
 - “I like that I can use my finger and control the movement I want to make to get through that mission, as opposed to just get stuck in one place.” – Dana
- *What causes you to spend on a particular game?*
 - “I want to get to the next level – looking at the map gotta get to this level, but this is stopping me from doing this. I just need the extra push.” – Dana
- *What causes you to start spending?*
 - “**Sometimes it’s curiosity**, there’s this game called Episode, essentially what it is, is creating your own plot and different twists for your own soap opera. In order for me to want the episode to go a certain way, I’d have to make purchases for it to **become the way that I want it to be**, and continue on from there.” – Melanie

Name	Gender	Age	Self Description	Free Time Activities	Spend per Month on Best Fiends	Other games
Randall	Male	26	Adventurous, playful, open-minded, expressive, try new things and experiences, loyal, ambitious	Sports, soccer, like to travel, play games	~\$20 / month	Monopoly, Dwindle, Galaxy Games, Scrabble

BEST FIENDS PAYERS: CANDY CRUSH COMPARISON

Players conceptualize Best Fiends based on their knowledge of Candy Crush ... and described Best Fiends as familiar, but better looking



"Best fiends is energetic... Candy Crush is cool, and it can be addictive, but it's not as appealing app-wise, graphics-wise, it's a bit more boring or stale compared to Best Fiends."
- Melanie

Interview snippets from Lite Payers

- *What got you really to start playing Best Fiends a lot?*
- "[Best Fiends] is a familiar concept at a different twist. ...The game is not telling you what to do [unlike Candy Crush]." - Dana
- "It's kind of like Candy Crush in the sense of levels and different features you can unlock. How does it feel different ... the look, the art, I don't know how to describe it." - Melanie

Name	Gender	Age	Self Description	Free Time Activities	Spend per Month on Best Fiends	Other games
Melanie	Female	29	Very energetic, creative, the confidant	Be with family and friends, a simple walk, BBQs, reading, biking	~\$20 / month	Crosswords, coloring games, Lumosity, Episode, Blackjack, Candy Crush, Angry Birds, games with levels

PUZZLE PRODUCT COUNCIL

These industry-leading puzzle experts strengthen the Insights & Advice sections included in each Puzzle Report

Helen Grabarchuk

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 of this Puzzle Report.

Ryan Winterholler

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 for 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.

PLAYER MOTIVATIONS



Understand emotional motivations to generate growth. The most impactful features are those that trigger strong, positive emotional responses

“Most companies segment their markets by customer demographics or product characteristics and differentiate their offerings by adding features and functions. But the consumer has a different view of the marketplace. She simply has a job to be done and is seeking to 'hire' the best product or service to do it. Jobs aren't just about function—they have powerful social and emotional dimensions.” – Clayton Christensen, co-author of [Jobs to be Done](#) framework

To create new innovations, focus on the emotional jobs that people want to accomplish. This is very applicable to our industry, where there is little practicality about playing a non-paying casino game. Therefore, we have to know the emotional drivers of our players.

Liquid and Grit has formulated key player motivations.

Player Emotional Motivations

- [Achieve](#) – Players who want to accomplish a goal
- [Thrill](#) – Players who want the excitement and stress of taking a risk
- [Surprise](#) – Players who want to uncover an unknown, see new opportunities, and try new things
- [Awe](#) – Players who want to experience quality production value
- [Flow](#) – Players who want to get into the zone and escape
- [Relationship](#) – Players who want to connect with other people
- [Association](#) – Players who want to identify with something for familiarity and comfort
- [Ownership](#) – Players who want to have things belong to them
- [Create](#) – Players who want to be creative and produce something

PUZZLE PERSONAS

	Stealthy Steve	Friendly Fran	Destructive Derek	Adventuring Adrian	Prospecting Polly	Daring Dan	Gathering Grace
Gender	76% male	72% female	73% male	55% male	78% female	69% male	71% female
Mean age	31.6	40.8	37.8	31.5	42.3	39.6	45.3
Highest preference(s)	Assault	Care and Manage	Manage	Journey	Journey and Coordinate	Assault and Coordinate	Coordinate
Lowest preference(s)	Care	Assault	Care	Manage and Care	Assault and Care	Journey and Care	All except Coordinate
Likes	Stealth, strategy, being the protagonist, skill progression, and exploration	Befriending non-playable characters (NPCs), creating an avatar, skill progression, and city or village handling	Strategy, city or base construction, and large-scale handling of NPCs	Creating an avatar, skill progression, being the protagonist, exploration and secrets, and befriending NPCs	Collecting rare items and treasures, exploration, skill progression, and tile matching	Racing, explosions, and stealth	Tile matching, platforming, and collecting rare items
Dislikes	Rhythm mechanics and pet training	Killing, war, weaponry, and explosions	Theft, illegal activities, stealth, retreating, and rhythm mechanics	Racing, sports, tile matching, instruments, dancing, and pet training	Theft, explosions, and retreating	No strong dislike for any particular mechanic	Killing, theft, destruction, and war

“I used to be embarrassed because I was just a comic-book writer while other people were building bridges or going on to medical careers. And then I began to realize: entertainment is one of the most important things in people’s lives. Without it they might go off the deep end. I feel that if you’re able to entertain people, you’re doing a good thing.”

– *Stan Lee*

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