

Puzzle Report

Competitive Research and Actionable Product Recommendations

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SEPTEMBER

2019

REVENUE DRIVERS

PUZZLE > EVENTS > QUESTS

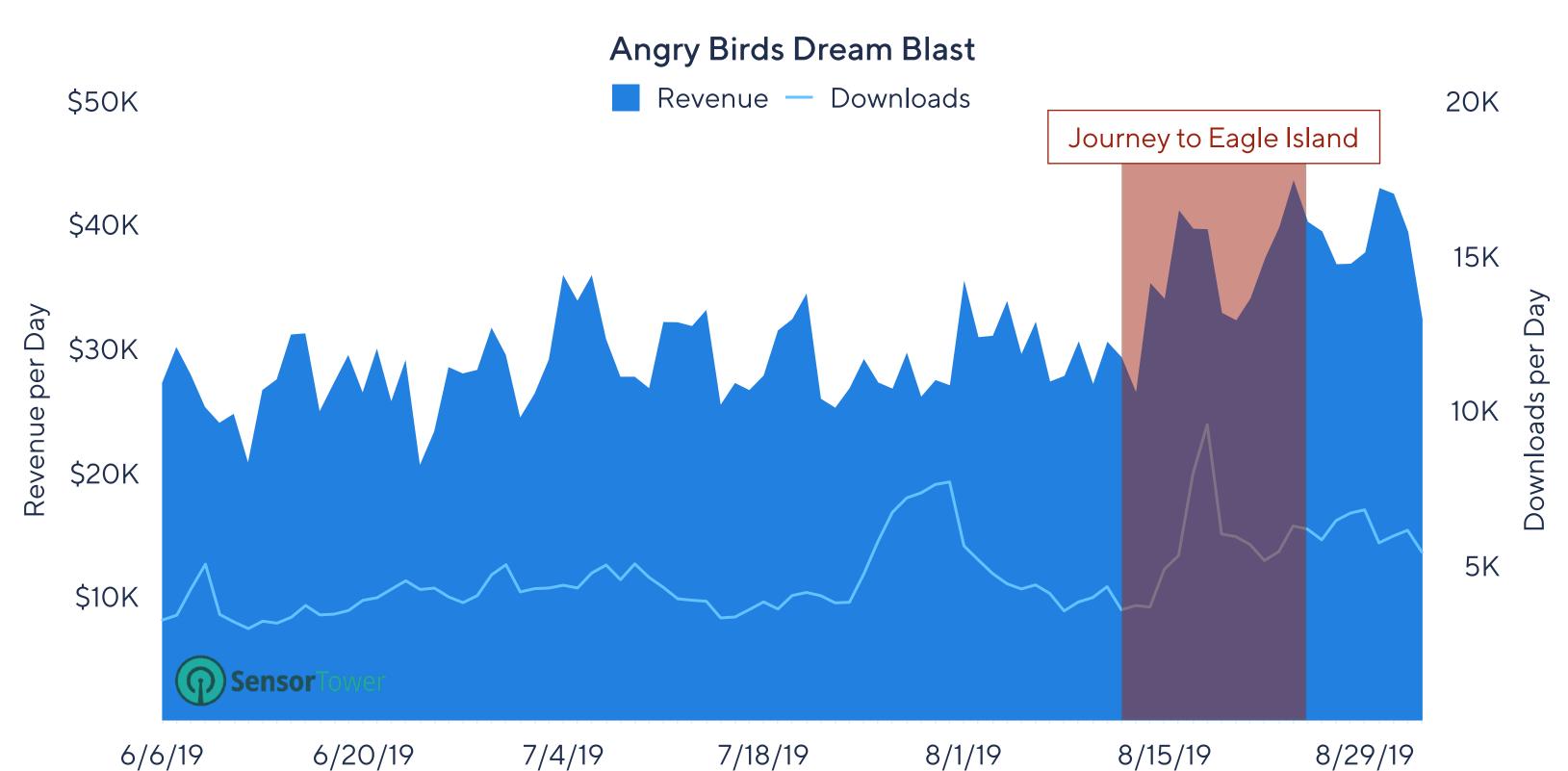
AVATAR UNLOCKING QUESTS

Journey to Eagle Island in Angry Birds Dream Blast

REVENUE ANALYSIS

Revenue was +19.7% and downloads +36.3% WoW in *Angry Birds Dream Blast (ABDB)* after the launch of the Journey to Eagle Island quest event. Revenue sustained at +21.2% 2Wo2W with downloads at +11.8%.

• The launch of *The Angry Birds Movie 2* likely boosted downloads. On 8/14/19, after the movie was released in the U.S., *ABDB* downloads were +60.4% WoW and +33.2% 2Wo2W. The movie also likely aided with the app's inclusion in iOS' "Featuring" category, generating 6,230 downloads for *ABDB* alone (plus additional downloads for the other Angry Birds apps).



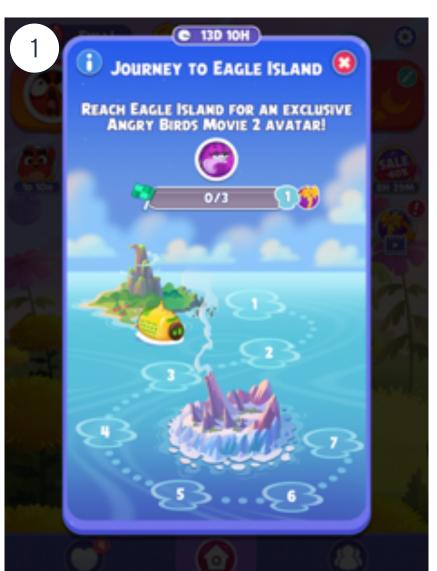
Releases Daily: Win Streak 8/12-8/25: <u>Journey to Eagle Island</u> — Quest event 8/12-8/16: Red's Challenge – Competition event 8/12: Special Offer — Currency event 8/14: Version Update 8/16-8/18: Team Event — Club event 8/17: New levels 8/17: \$1.99 Starter Pack moved +1 to #9 8/17-8/18: <u>Level Race</u> — Competition event 8/19-8/22: Red's Challenge — Competition event 8/19: \$2.99 Small Bundle moved +1 to #7 \$1.99 Starter Pack moved +1 to #8 8/23-8/25: Special Offer — Currency event 8/24-8/25: <u>Level Race</u> — Competition event 8/23-8/25: Team Event — Club event

FEATURE TEARDOWN

During this quest event, players complete levels on a map to unlock presents and an exclusive avatar from *The Angry Birds Movie 2*.

Details

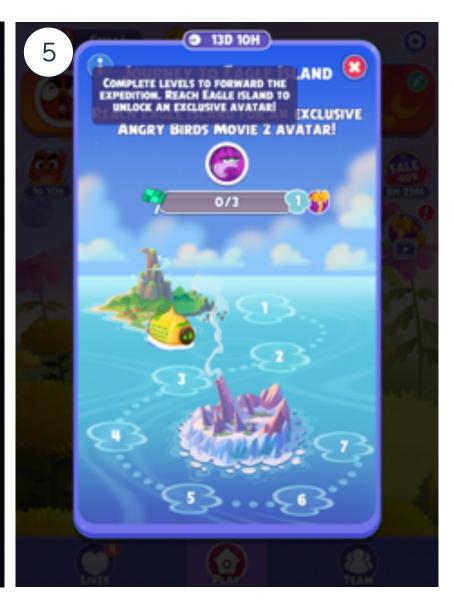
- Players complete levels to progress along the quest map (1).
- Successfully completing levels rewards players with experience points (2).
- Filling a meter with experience points advances players to the next map location and unlocks a present containing coins ($\frac{3}{2}$ and $\frac{4}{2}$).
- Players who reach Eagle Island receive an event-exclusive avatar from *The Angry Birds Movie 2* ($\frac{5}{2}$).













Quickly find more information in the Feature Database

- Watch the Journey to Eagle Island <u>YouTube promo</u> for more information.
- See the <u>Journey to Eagle Island</u> Library for more images and videos.

ROADMAP DATA

Angry Birds Dream Blast's event investment is much more focused on competition events than the 15 highest-grossing Puzzle apps.

Roadmap Details

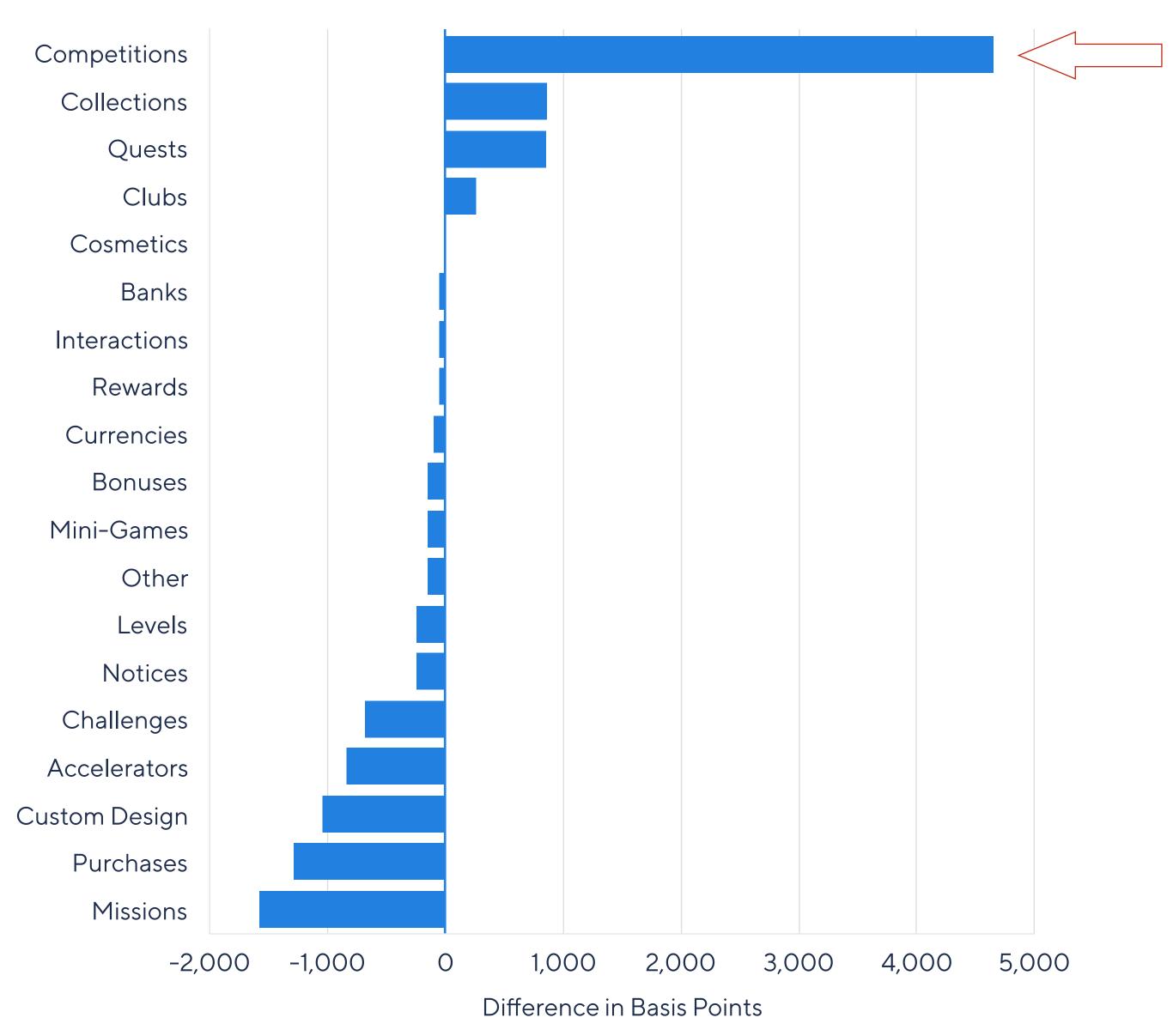
- Competition events in *ABDB* include <u>The Mission</u>, <u>Stella's Store</u>, <u>Easter Challenge</u>, and <u>Team Event</u>.
- Download an Excel file using the <u>Data Tool</u> for more event and feature insights on *ABDB*.
- Review the <u>L&G Taxonomy</u> in the Appendix for more information on quest events.



Analyze competitors' roadmap data

• Download release insights by app using the <u>Data Tool</u>.

Event Investments: ABDB vs. Top 15 Grossing



PRODUCT INSIGHTS

Test quest events—an underused event type for Puzzle apps—with unlockable avatars that are exclusive or add value to players' experience.

Product Recommendations

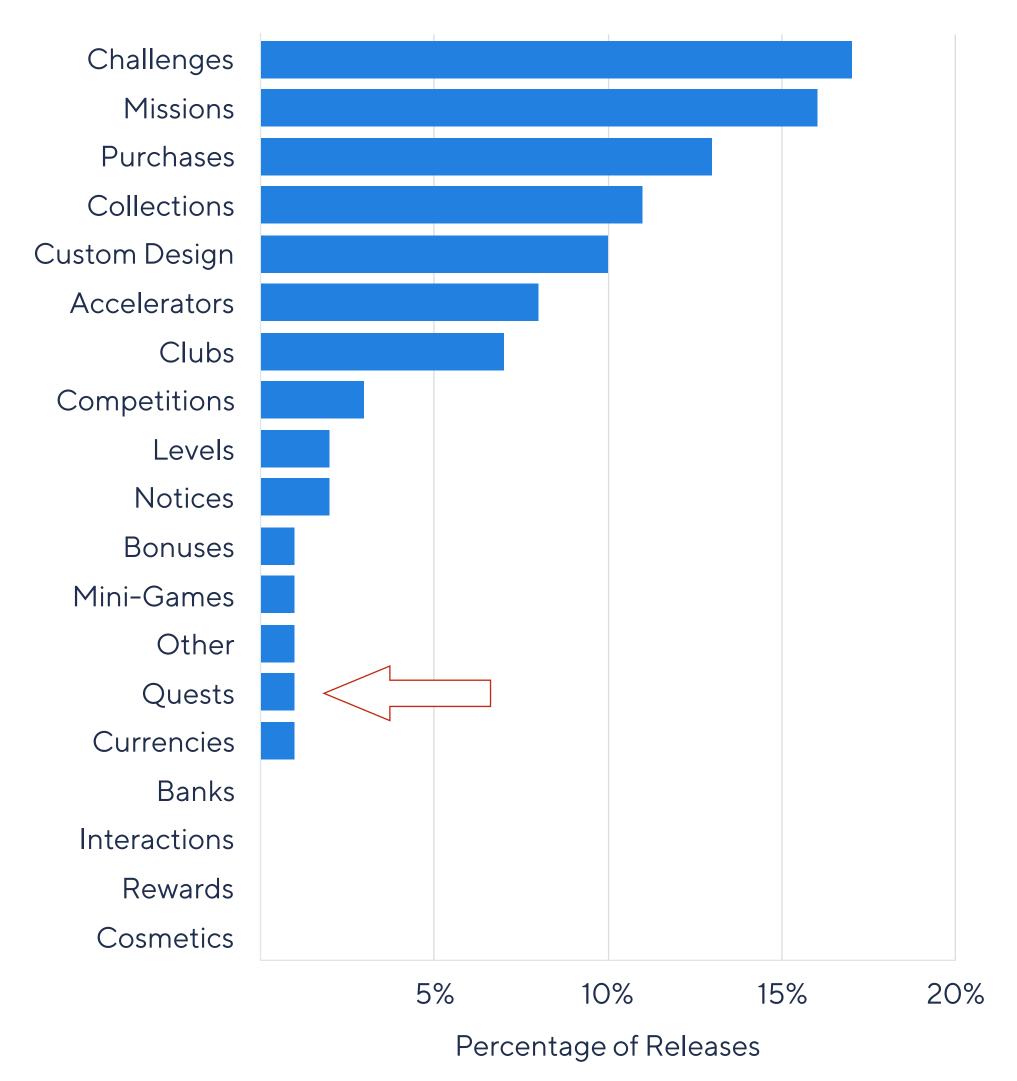
- Release exclusive avatars with community-based or core gameplay boosts. This is a proven revenue-driving mechanic is both Puzzle and Casino. In Casino, Big Fish Casino's revenue was +66% WoW during an event where players unlocked avatar frames. When players with frames joined a room, all the players in that room were awarded bonus chips (see the <u>Unlocking Avatars</u> Wiki for details).
- Quest events made up just 1% of new events released by the 15 highest-grossing Puzzle apps in 2019 (and only 2% in 2018). The major event investments are challenges, missions, and purchases (see the graph for details).
- Quests target Challenger Chris players who enjoy puzzle games to relax, achieve an objective, and avoid boredom. Challenger Chris spends the most time playing puzzle games, lots of time playing non-puzzle games, and lots of money on games in general. Challenger Chris is thorough, often reserved, and might consider himself a perfectionist (see the Appendix for details on the L&G Puzzle Personas).



Easily read more insights on any mechanic

- Review previously-released revenue drivers in the Wiki Tool.
- Find all the information on specific mechanics, like collection features.

Event Investment: Top 15 Grossing



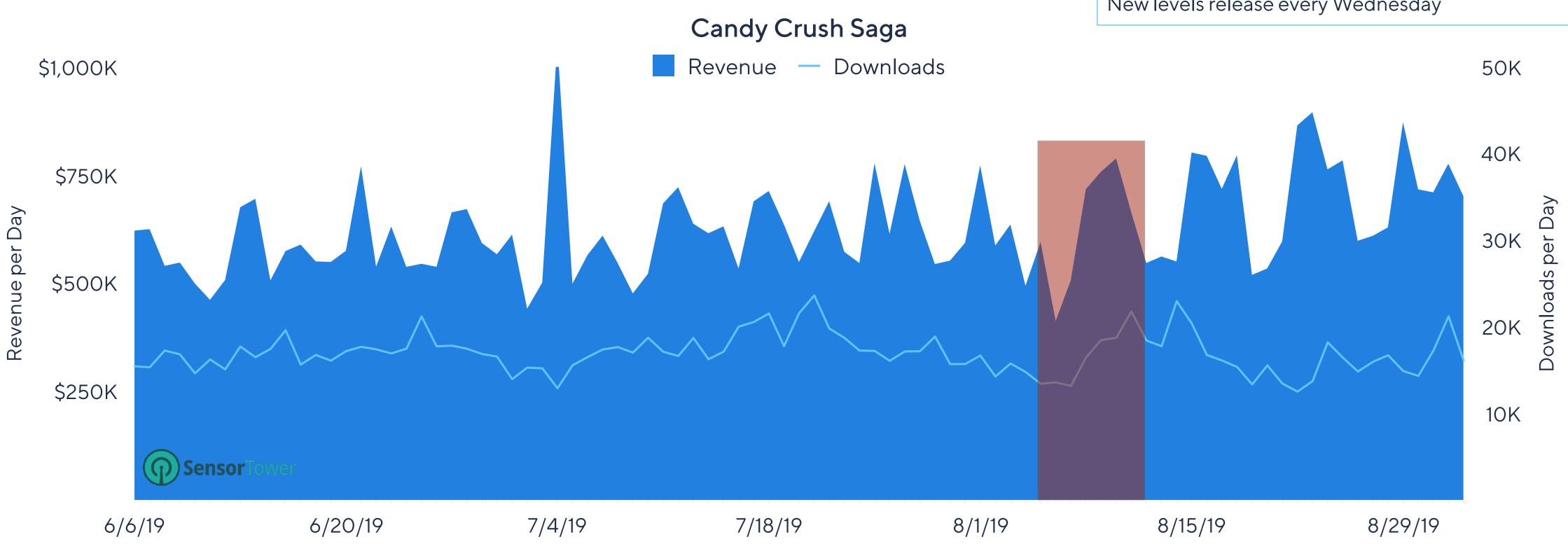
PUZZLE > FEATURES > COMPETITIONS

EXCLUSIVE WEEKLY RACES

Champions Race in Candy Crush Saga

REVENUE ANALYSIS

Candy Crush Saga's (CCS) revenue increased +6.3% WoW and +4.7% 2Wo2W as the new feature, Champions Race, rolled out. Champions Race was first seen in the app in June and gradually released to more players through August.



8/5-8/11: Champions Race — Competition feature

8/5-8/8: Candy Pet — Challenge event

8/8-8/12: <u>Space Race</u> — Competition feature

8/8: <u>Lucky Beans</u> — Mini-game event

8/8-8/9: <u>Tasty Keys</u> — Level event

8/15-8/16: <u>Tasty Keys</u> — Level event

8/15-8/19: Space Race — Competition feature

8/12-8/15: <u>Candy Pet</u> — Challenge event

8/12-8/18: Space Dash — Challenge event

No IAP updates since 10/12/18

New levels release every Wednesday

FEATURE TEARDOWN

In this competition event, players try to beat more levels than their friends. The top three finishers amongst friends earn tickets to the Champions Race.

Weekly Race Details (established feature)

- Weekly Race runs from Monday through Sunday and has been in the app for years.
- Players are ranked amongst their friends based on levels completed (1).

Champions Race Details (new feature)

- Finishing in the top three amongst friends in the Weekly Race unlocks a Golden Ticket to the Champions Race (2).
- Champions Race runs from Monday through Sunday.
- Players in the Champions Race are not in the Weekly Race for that week.
- Players beat levels to rank on a leaderboard (3).
- The top three finishers earn rewards (4).



Quickly find more images and videos

• See the <u>Champions Race</u> Library for more images and videos.









ROADMAP DATA

Candy Crush Saga invests most heavily in challenge events, which account for 36% of all the app's new events for 2019. Compared to the 15 highest-grossing Puzzle apps, CCS's emphasis on challenge events exceeds the average investment by 1,953 basis points.

Roadmap Details

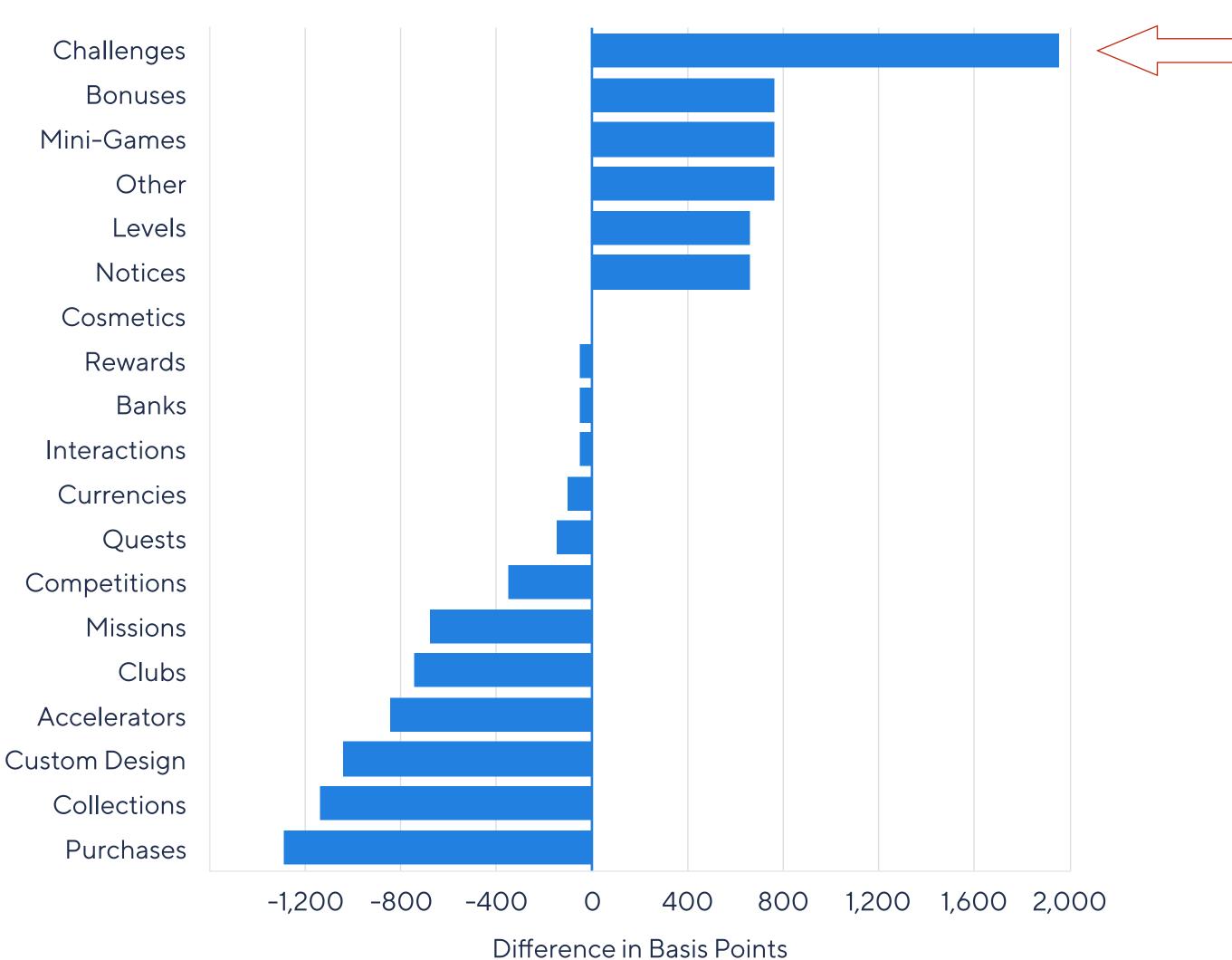
- Challenge events in *CCS* include <u>Fantastic Five</u>, <u>Build a</u> <u>Bot</u>, and <u>Lovely Letters 2019</u>.
- CCS has released 11 new events in 2019.
- Download an Excel file in the <u>Data Tool</u> for *CCS*'s event and feature investments.



Analyze competitors' roadmap data

• Download release insights by app using the <u>Data Tool</u>.

Event Investments: CCS vs. Top 15 Grossing



PRODUCT INSIGHTS

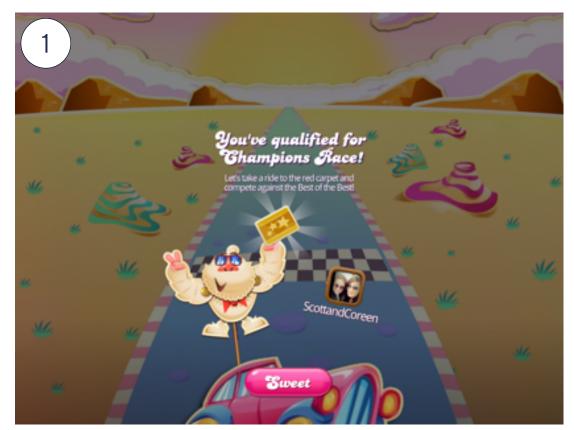
Within competition features, start players with smaller, more approachable groups. Then, incrementally transition players to more competitive, global groups. This will increase feature adoption for beginners and drive spend with highly-engaged players. Lastly, add social elements to the competition.

Product Recommendations

- Start players in friends-only competitions for wider feature adoption. In Champions Race, players initially compete against their friends—a welcoming, fun, and safe place for most players to begin (1).
- Expand from friends to global groups to challenge highly-engaged players. Transitioning from a friends group to a global leaderboard is a fairly unique design (typically, apps build separate groups for friends and global competitions). This design creates a progression that starts with familiar groupings (2).
- For a v2 release, add a permanent league in the Champions Race. If players beat their friends, enter the Champions Race, and stay above the bottom quartile of players, keep them in a league-based system. Then, promote the highest-tier players into an Elite Race and demote the lowest players back to the friends-only tier (3).

Research Insights

• Make competitions social—players who are attracted to competition are generally interested in group dynamics. According to a survey of 270K players, "Competition and Community essentially both load on a single Social factor. . . . Gamers who enjoy social interaction tend to like all kinds of social interaction, whether it's chatting, or emoting high fives, or being on a team, or playing against another team." (Source: Competition Is Not The Opposite of Community)







RECENTLY LAUNCHED

PUZZLE > GAMES

SUGAR BLAST BY ROVIO

APP TEARDOWN

Rovio's newest app, Sugar Blast, is very similar to Angry Birds Dream Blast without the Angry Birds IP. Both apps are heavily inspired by King's Diamond Diaries Saga.

App Details

- Sugar Blast was soft launched 7/3/19 in the United States, Finland, Poland, and Sweden.
- Worldwide launch was 9/4/19.
- Sugar Blast is a near-reskin of Angry Birds Dream Blast ($\frac{1}{2}$).
- Sugar Blast soft-launched with a clubs feature called $\underline{\mathsf{Teams}}$ ($\underline{\mathsf{3}}$ and $\underline{\mathsf{4}}$).

Additional Insights

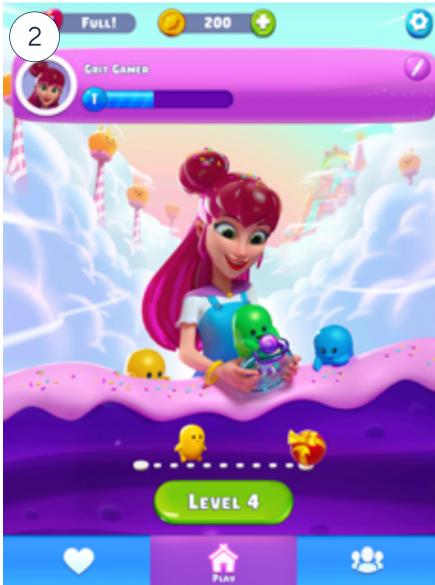
- Sugar Blast and Angry Birds Dream Blast are both similar to King's Diamond Diaries Saga.
- See the July 2018 Puzzle Report for an economy teardown of Diamond Diaries Saga.
- All three apps use the same:
 - Physics trajectory movement for the core gameplay.
 - Boost mechanics.
 - · Level design progressions.

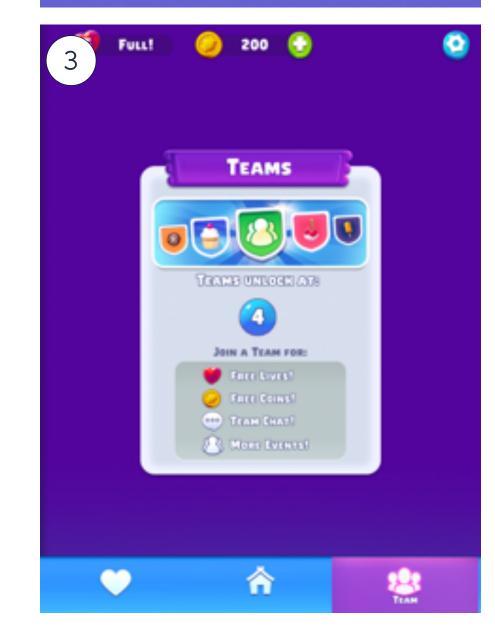


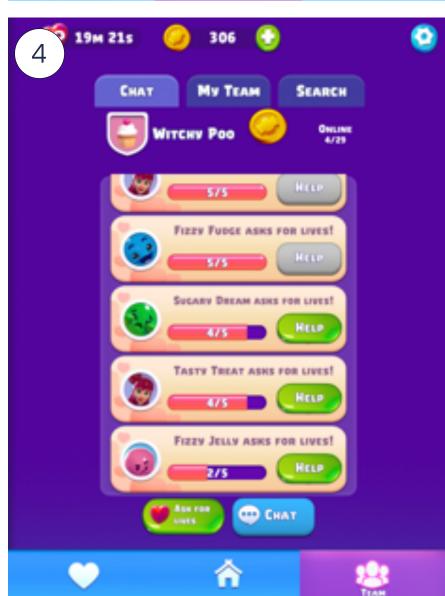
Readily Available Information Online

- For more information, review the ...
- Angry Birds Dream Blast <u>Deconstruct</u>
- Diamond Diaries Saga <u>Libraries</u>
- Sugar Blast Libraries









LEVEL MECHANICS

NEW LEVEL DESIGNS I

Fusion Bomb* — Toon Blast

- Players match colors and activate boosts adjacent to fusion bombs.
- Each match destroys a canister of the corresponding color on the fusion bomb (1).
- Destroying all canisters blows up the bomb and clears the level (2).

Magic Hats - Homescapes

- Magic hats appear on the board. Each magic hat shows an item and a number.
- Players collect the specified number of items to activate the magic hat and clear part of the board.

Nets – Fishdom

- Nets block pieces from falling onto part of the board.
- Players make matches next to or under nets to remove them.

Safes — Fishdom

- Players open safes on the board by making matches or exploding power-ups in adjacent spaces.
- Open safes can be cleared with another adjacent match or power-up.



^{*} Level mechanic found on YouTube or fan sites.

NEW LEVEL DESIGNS II

Squirrel - Solitaire Grand Harvest

- · Numbered squirrels block cards on the board.
- Players use cards labeled with acorn icons to feed the squirrels the specified number of acorns (1).
- The squirrel disappears once its number reaches zero.

Red's Popcorn Spell - Angry Birds 2

• This special ability causes a cascade of popcorn to rain down over the level and knock down structures (2 and video).

Leonard — Angry Birds 2

- Players collect feathers to unlock Leonard during the <u>Unlock</u> <u>Leonard event</u>.
- After launching Leonard, players fire up to three snot bombs by tapping on the screen.
- Snot bombs fire in the direction that Leonard is facing and propel Leonard in the opposite direction (3 and video).

Ghosts – Disney Emoji Blitz

- Players use power-ups to collect ghosts (4 and video).
- Uncollected ghosts eventually explode, removing one health from players.
- The game ends when a player's health reaches zero.
- This feature was first seen in the <u>Haunted Mansion Survival Event</u> and is similar to Disney Emoji Blitz's <u>Wildebeests</u> mechanic.









MARKET WATCH

NOTABLE RELEASES I

Арр	Library	Description			
Matchington Mansion	<u>Glow's Comics</u>	 Players beat levels to collect paint and fill in comic panels. Filling in four panels completes a comic and unlocks a reward. Players can use soft currency to complete comics at the end of the event (1). 			
Solitaire Grand	<u>Winner's Fair</u>	 Players beat levels to collect stars and unlock fair booths. Inside the fair booths, players complete missions to earn rewards (2). 			
Harvest	<u>Turbo Harvest</u>	 Players complete events and missions to win a new boost called Turbo Harvest. Turbo Harvest allows players to collect Harvest bonuses every 30 minutes instead of every hour. 			
Cookie Jam	<u>Campfire Prize</u> <u>Shop</u>	 This reskin of the in-game shop gives players a limited time to make purchases with tickets collected during play (3). The shop now includes chests with pet costumes for a secondary collection feature. 			







NOTABLE RELEASES II

App	Library	Description
Angry Birds 2	<u>Unlock Leonard</u>	 Players collect or purchase feathers to unlock a new character, Leonard the Pig. An event-exclusive sale allows players to purchase three different packages of feathers. Purchasing all three packages unlocks a bonus of 10K feathers (1). Leonard's special ability allows players to shoot three snot bombs during play.
Home Design	<u>Bountiful Blooms</u>	 During this event, players beat levels to grow flowers and fill a meter. Filling the meter rewards players and unlocks the next meter (2).
Makeover!	Movin' On Up	 During this event, players earn boosts for back-to-back wins on the first try. Players receive more boosts and improved boosts for longer win streaks (3).







NOTABLE RELEASES III

Арр	Library	 Players complete levels to collect beans and stars. Players use beans and stars to fill a meter to grow their Cropsie, a Tamagochi-style plant pet (1). This is similar to Candy Crush Saga's Candy Pet and Angry Birds 2's Extra Birds. 			
Farm Heroes Saga	<u>Cropsie Garden</u>				
Pet Rescue Saga	Episode Race and Rescue Racing	 In the Episode Race competition feature, players race to beat levels on the main map. The Rescue Racing challenge event rewards players for winning a certain number of races within a time limit (2). 			







Quickly review all the events and features released

• Use the <u>Library Tool</u> and filter by year and month to see all the releases.

APPENDIX

MECHANICS TAXONOMY

Family	Definitions
<u>Accelerators</u>	Increases the power, impact, or efficiency of play
<u>Banks</u>	Saves a % of spend that can be unlocked later
<u>Bonuses</u>	Free bonuses given to players (e.g., retention, W2E)
<u>Challenges</u>	Players must play, complete, and win
<u>Clubs</u>	A group accomplishing goals or competing with other groups
<u>Collections</u>	A set of items players collect (often for a completion prize)
Competitions	Players competing against other players
<u>Cosmetics</u>	Improvements or updates to the app or a feature
<u>Currencies</u>	Changes to currencies, economies, stores, and items
<u>Custom Design</u>	Options to customize the look
<u>Expansions</u>	Additional rooms, worlds, play modes, VIP lounges, etc.
<u>Flows</u>	Specific flows, like the NUX, ratings, and surveys

Family	Definitions
<u>Hazards</u>	Level elements/blockers that make levels more difficult
<u>Interactions</u>	Any social feature with direct or indirect interaction
<u>Leaderboards</u>	Stand-alone leaderboards
<u>Levels</u>	Anything to do with leveling
<u>Mini-Games</u>	Smaller, shorter games within a game (e.g., scratcher cards)
<u>Missions</u>	A linear set of tasks that players must accomplish
<u>Notices</u>	Feature or product announcements
<u>Other</u>	Miscellaneous features and outliers
<u>Profiles</u>	Related to a player's setup, profile, settings, and controls
<u>Purchases</u>	Anything to do with purchases
<u>Quests</u>	Completing tasks to progress along a map or map-like feature
<u>Rewards</u>	Any reward players receive for engagement or spend (other than the bonuses family)

UTILIZE L&G'S TOOLS

Uncover new puzzle trends and understand competitor investments with Liquid and Grit's tools and capabilities. Our new Matrix Tool is now live!



DATA TOOL

- 1. Find new trends using the Data Tool's categorization.
- 2. Benchmark your app's output against competitors.
- 3. Export data into .csv to do more in-depth analysis.





- 1. Reference all Liquid and Grit's insights.
- 2. Find and download previous reports.
- 3. Uncover revenue-driving features from other genres.





- 1. Watch videos to understand animations and flows.
- 2. Download images to use as design templates and spec references.
- 3. Check out level-locked machines and features.



MATRIX TOOL

- 1. Benchmark the features in your app against specific competitors.
- 2. Find opportunities in the market for your app's growth.
- 3. Design a new app concept using features inspired by different games.

PUZZLE PERSONAS

Using the *Motivational Buckets* developed by Liquid and Grit in partnership with Kinrate Analytics, five distinct Puzzle personas emerge: Gamer Gary, Escapist Emily, Trainer Tracy, Challenger Chris, and Casual Carol.

L&G Puzzle Personas

- Gamer Gary: This player is a hardcore gamer who is not afraid to spend money on any gaming platform. Relative to other players, this player's strongest Motivational Bucket is Engrossment. He gets immersed in the game world, identifies with the characters, and relates to other players.
- Escapist Emily: This persona spends a decent amount of time playing puzzle games and is not afraid to spend money. Games are therapeutic for her in that they reduce negative feelings and make worries more bearable (the *Motivational Bucket Escape*). She also likes to be social, interact with friends, and participate in group events. In terms of personality traits, she shows a much higher score on *anxiousness/agitation* and lower score on *outgoing/social*.
- Trainer Tracy: This is the largest, most female, and oldest player group. She does not spend a lot of money on games. Relative to other players, her motivation is <u>Utility</u>, most often in the form of beneficial impacts to her brain. She shows the highest preference towards word puzzles, memory puzzles, mazes, and riddles. She is sometimes unsure if games are worth it. Based on her personality, she is more likely to be <u>diligent/obligatory</u>.
- Challenger Chris: This player spends the most amount of time playing puzzle games, lots of time playing non-puzzle games, and lots of money—but not as much on F2P games. His Motivational Bucket is Challenge, and he plays to relax, to achieve an objective, and to avoid boredom. He has the highest preference for logical problem solving, in-depth understanding, and thinking outside the box. Challenger Chris is also likely to be diligent/obligatory.
- Casual Carol: She is younger, spends the least amount of money, and dedicates limited time to puzzle games. She sometimes plays to forget real-life problems and make her own decisions. Her Motivational Bucket is Boredom and she has a lower score for curiosity/imagination.

PUZZLE PERSONAS: FEATURES AND THEMES

- Gamer Gary, relative to the other personas, enjoys competitive features like arenas, tournaments, and leaderboards. He also enjoys mini-games. Surprisingly, missions or quests are not his favorite (likely because they do not involve other people). He also enjoys fictive qualities such as story, anime style, and game music. His favorite themes are realism, mystery, and fantasy/sci-fi.
- Themes are important to Escapist Emily. She uses fantasy, mystery, and realistic styles to get away from the real-world. She also enjoys good music, art, and humor. She does not like leaderboards or tournaments, likely because of the negative feelings losing can produce.
- Trainer Tracy wants a realistic and believable game because she is not here to play but to improve. Competitive elements like leaderboards can help her better herself, and she is interested in impressive physics, likely to help sharpen her mind. Surprisingly, she is not interested in missions or quests, perhaps because they are too gamey. She also appreciates a good mystery.
- Challenger Chris enjoys interesting themes while he completes missions or quests. However, the themes should not be too realistic, as he understands he is playing a game and wants it to look like a game—and feel different from real-life. He appreciates some humor, hidden objects, and mini-games. He enjoys mystery, likely because of the solvable challenge, and fantasy.
- Casual Carol has a weak preference towards features or themes relative to other personas. She does not care for artistic style, impressive physics, mini-games, or hidden objects. She wants her games to be realistic.

Table: Motivation to play puzzle games comparatively (means of standardized factor scores) for the five player personas.

	Gamer Gary	Escapist Emily	Trainer Tracy	Challenger Chris	Casual Carol
Cartoonish style	1.2	0.7	-1.4	-0.2	-0.3
Tournaments	1.8	-0.4	-0.6	-0.3	-0.4
Arenas	1.8	-0.3	-0.5	-0.4	-0.5
Retro or pixel graphics	1.8	-0.4	-0.4	-0.4	-0.6
Leaderboards	1.7	-0.8	-0.2	0.0	-0.8
Interesting theme	-0.4	0.3	-0.7	1.6	-0.8
Missions or quests	0.5	0.0	-1.1	1.4	-0.8
Anime/manga style	1.6	0.3	-0.8	-0.3	-0.8
Humor	1.4	0.2	-1.0	0.2	-0.9
Good and mood-appropriate music	1.4	0.5	-0.9	-0.2	-0.9
Fascinating story	1.6	0.0	-0.7	0.0	-1.0
Realistic and believable style	1.5	0.1	0.2	-0.8	-1.0
Hidden objects	1.4	0.2	-0.5	0.2	-1.3
Mini-games	1.4	0.2	-0.5	0.1	-1.3
Point-and-click style	1.5	0.0	-0.3	0.0	-1.3
Impressive and authentic physics	1.4	0.3	-0.2	-0.1	-1.4
Artistic style	0.9	0.6	-0.5	0.5	-1.5

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

Market Research

Quadrant Strategies website

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

Player Personas

Kinrate Analytics website

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 Al-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

Mobile App Store Intelligence

Sensor Tower website

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







"I suppose my formula might be: dream, diversify and never miss an angle."

- Walt Disney

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