



SLOTS DESIGN REPORT

Competitive Research and Data Insights for Slots Designers

TABLE OF CONTENTS

NEW INNOVATIONS 3

Who Wants to Be a Millionaire-Style Bonuses
Mirror Me if You Can in *Slotomania*

Multi-Reel Stepper Machines
Santa’s Party in *Lotsa Slots*

SLOTS TRENDS 10

Wheels
Jackpots
Themes

MARKET WATCH 14

Notable Releases I, II, & III

NEW L&G CAPABILITIES 18

Feature Database Tool: Notifications
Feature Database: Data Tool
Slack Shared Channels

APPENDIX 22

Liquid and Grit Slots Personas
Premium Partnerships

JANUARY

2020

NEW INNOVATIONS



CASINO > CONTENT > SOCIAL

WHO WANTS TO BE A MILLIONAIRE-STYLE BONUSES

Mirror Me if You Can in *Slotomania*

MECHANIC TEARDOWN

Wilds randomly trigger a trivia mini-game inspired by *Who Wants to Be a Millionaire*. During the mini-game, players answer multiple-choice questions to climb a jackpot ladder.

Train the Mirror Bonus

- Wild symbols can randomly trigger a trivia mini-game.
- Players answer multiple-choice questions about the machine to move up a jackpot ladder ([video](#)).
- Players are randomly given one of three types of help for each question:
 - Dwarves vote on the answer ([1](#)).
 - Two incorrect answers are removed ([2](#)).
 - A prince guesses the answer.
- Players can walk away with their current prize at any time.
- If players answer incorrectly, they receive the previous jackpot on the ladder ([3](#)).
- Correctly answering all eight questions awards the grand jackpot.

Free Spins

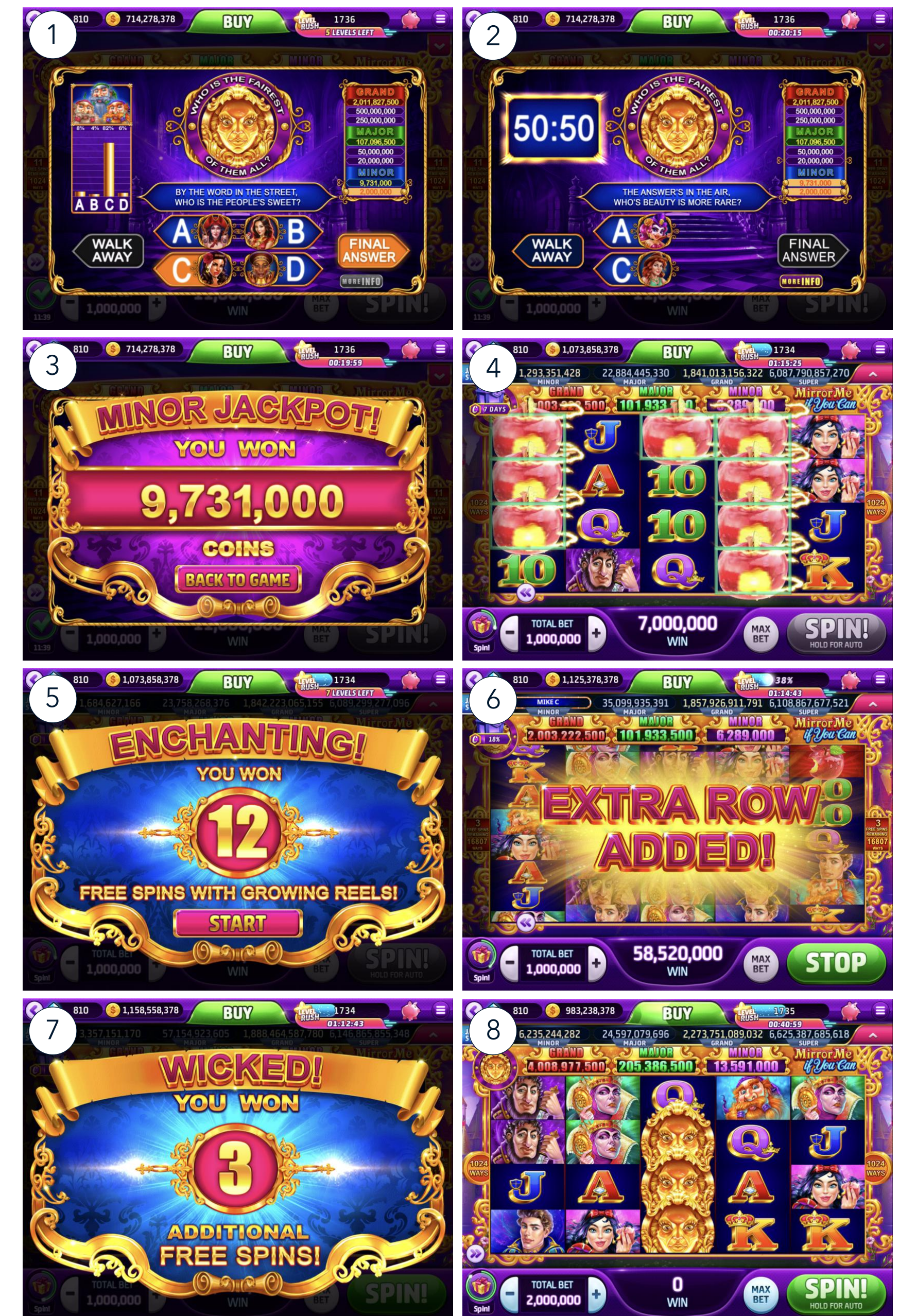
- Landing eight or more apples awards twelve free spins ([4](#), [5](#), and [video](#)).
- One additional row is added every three spins—for a total of three additional rows ([6](#)).
- During free spins, landing eight or more apples awards three extra free spins ([7](#)).
- Extra free spins are played with all three additional rows.

Mirroring Wilds

- Wilds appear on reels 2, 3, and 4.
- Wilds can expand up or down a random number of positions ([8](#)).

Additional Information

- See more images and videos in the [Mirror Me if You Can](#) Library.



EXPERT INSIGHTS

Target specific player types with skill-based bonus games. To increase engagement, ensure gameplay accurately reflects marketing.

Engagement

- **Appeal to specific player personas with skill-oriented bonuses.** Mirror Me if You Can's innovative *Who Wants to Be a Millionaire*-style bonus attracts Daydreamer Denise and Sensation Serena players who favor challenge features and have the strongest beliefs in their ability to control outcomes.¹
- **Align gameplay with machine marketing.** The loading screen seems to imply that Mirror Me if You Can's bonus game rewards players for their knowledge and decisions (1). However, the questions are not based on clear sources of in-app or real-world information, producing a chance-based bonus game.

Retention

- **Let players earn marquee bonuses by filling meters or completing collection goals.** Unlike random triggers, goal-oriented tasks provide players with feedback as they progress. A study found that players who receive positive feedback feel more autonomous and competent, resulting in higher intrinsic motivation and an increased likelihood of both immediate and future play.²
- **Match bonus durations to the time it takes to trigger the bonus.** Activating the Train the Mirror Bonus can take hours of play (it took our team ~2,000 spins) but can end in as little as 30 seconds. Numerous workplace studies have found that this type of effort-reward imbalance leads to higher rates of burnout, which could deter players from returning in the long term.³



¹ [L&G Slots Personas Report](#), p. 17-21, 28-34

² [How feedback boosts motivation and play in a brain-training game](#), p. 97-98, 101

³ [Reviewing the effort-reward imbalance model: drawing up the balance of 45 empirical studies](#), p. 1121-1124

CASINO > CONTENT > SOCIAL

MULTI-REEL STEPPER MACHINES

Santa's Party in *Lotsa Slots*

MECHANIC TEARDOWN

During a respins bonus, players fill positions with stars and gifts to earn jackpots. Gifts trigger free spins at the end of respins—with one additional reel set unlocked per gift.

Respins

- Landing three or more stars triggers three respins (1 and [video](#)).
- Only stars and gifts can land during respins.
- Both stars and gifts reset the respins counter (2).
- At the end of the respins, players earn a jackpot based on the number of positions filled (3).
- Players must meet minimum bet requirements to earn bigger jackpots (4).
- Filling all nine positions awards the grand jackpot (5).

Free Spins

- Gifts only appear during respins.
- Landing at least 1 gift awards 10 free spins at the end of the respins bonus.
- Each gift unlocks one additional reel set for the free spins (6).
- Respins can be triggered during free spins (7).
 - During respins, gifts unlock more reel sets and reset the free spins counter once respins end (8).
- Players can unlock up to nine reel sets.

Additional Information

- See more images and videos in the [Santa's Party](#) Library.



EXPERT INSIGHTS

Fine-tune user interface design and animations to improve player satisfaction. Use clear, compelling bet-up screens to increase bet sizes.

Retention

- **Maintain visual separation between distinct machine elements.** User interface design matters: A study of over 6,000 1- and 2-star reviews of 20 popular apps found that poor interface design was the 5th most commonly cited issue.⁴ Icons that float over game elements create clutter and usability issues (1). Design expandable menus that cover up background visuals when in use and collapse out of sight afterward (2).
- **Increase player satisfaction by using kinetic animations for big boosts and wins.** Santa's Party reveals additional reel sets using a fairly straightforward dissolve. Instead, create exciting moments by introducing new visual elements with satisfying animations that accelerate at the start and decelerate at the end.⁵

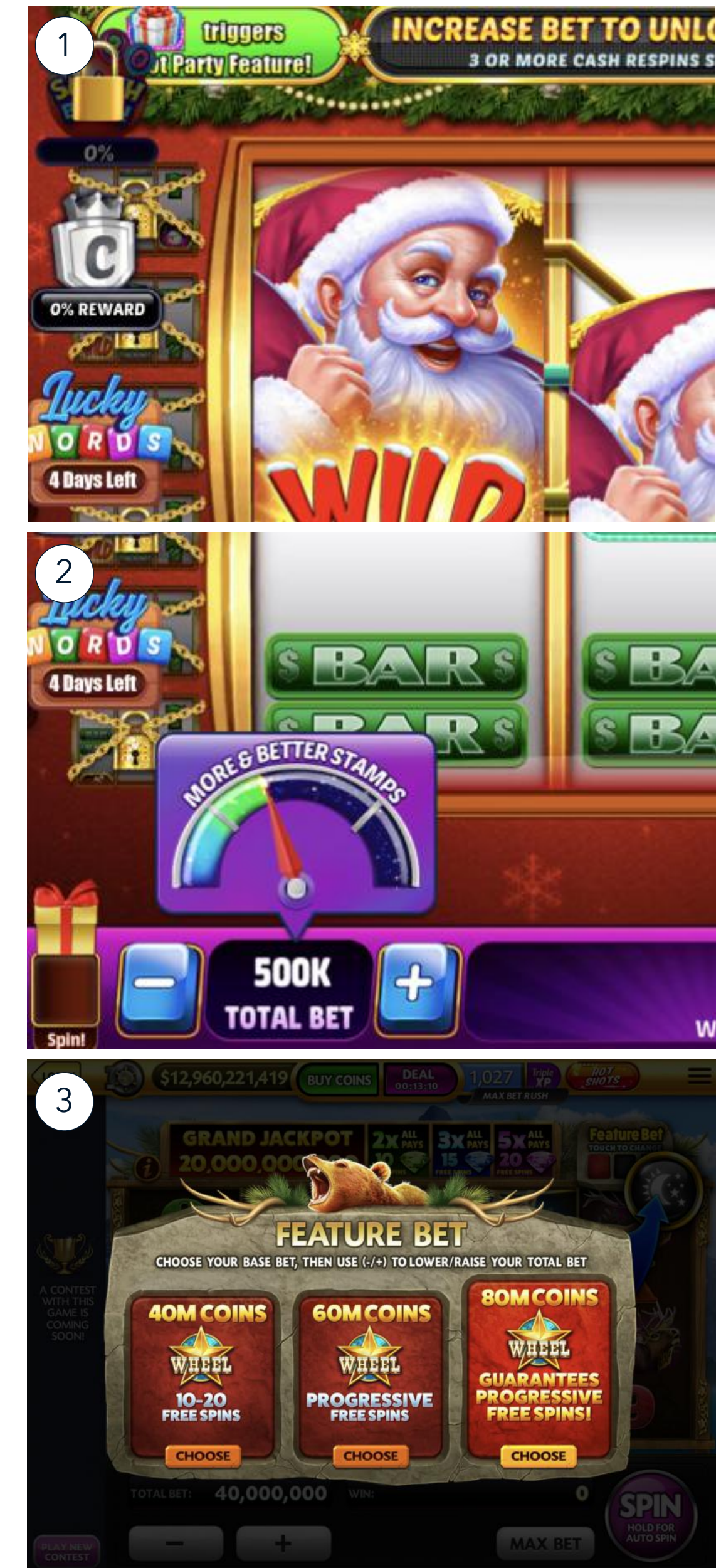
Engagement

- **Clearly illustrate bet-up benefits on loading screens and during play.** Santa's Party uses a meter above player bets to show minimum bet requirements for different jackpot sizes (2). Caesars Slots' newly released **Kodiak Mountain** machine has players choose a bet tier from a launch menu that lays out the unique benefits of each tier (3). Further incentivize large bets by adding unique perks beyond bigger jackpots, like Kodiak Mountain's guaranteed progressive free spins.
- **When offering a suite of benefits, be careful not to cause information overload.** As the "**The Gamer's Brain**" GDC talk on *Fortnite* illustrates, players can only retain so much new information at one time. To avoid confusion, consider contextualizing each tier with an example image, as in *Fortnite*'s weapon repair-to-crafting tutorial.⁶

⁴ [What Do Mobile App Users Complain About?](#), p. 5

⁵ [Squeezing more juice out of your game design!](#)

⁶ [The Gamer's Brain, Part 2: UX of Onboarding and Player Engagement \(GDC16\)](#)



SLOTS TRENDS

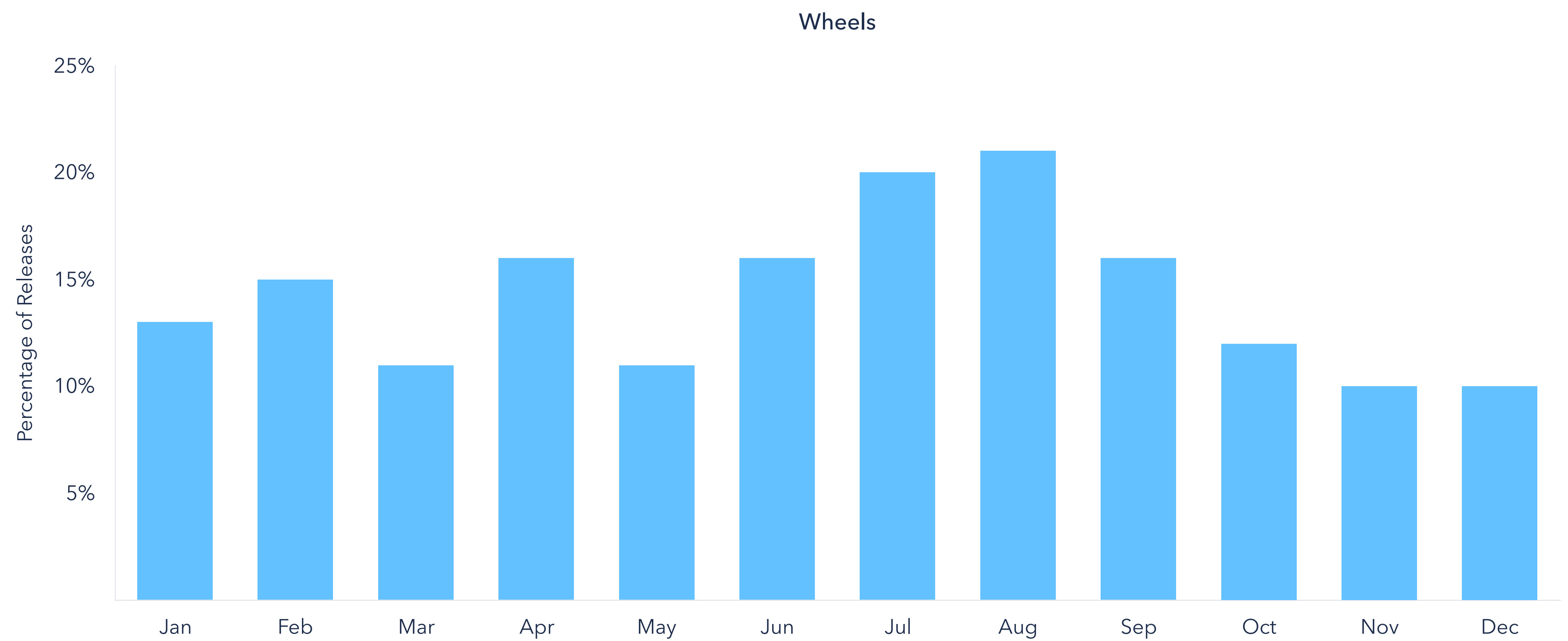


Tracked slots apps:

Big Fish Casino, Caesars Slots, Cash Frenzy, Cashman Casino, DoubleDown Casino, DoubleU Casino, Heart of Vegas, Hit It Rich!, House of Fun, Huuuge Casino, Jackpot Magic Slots, Jackpot Party, POP! Slots, and Slotomania

WHEELS

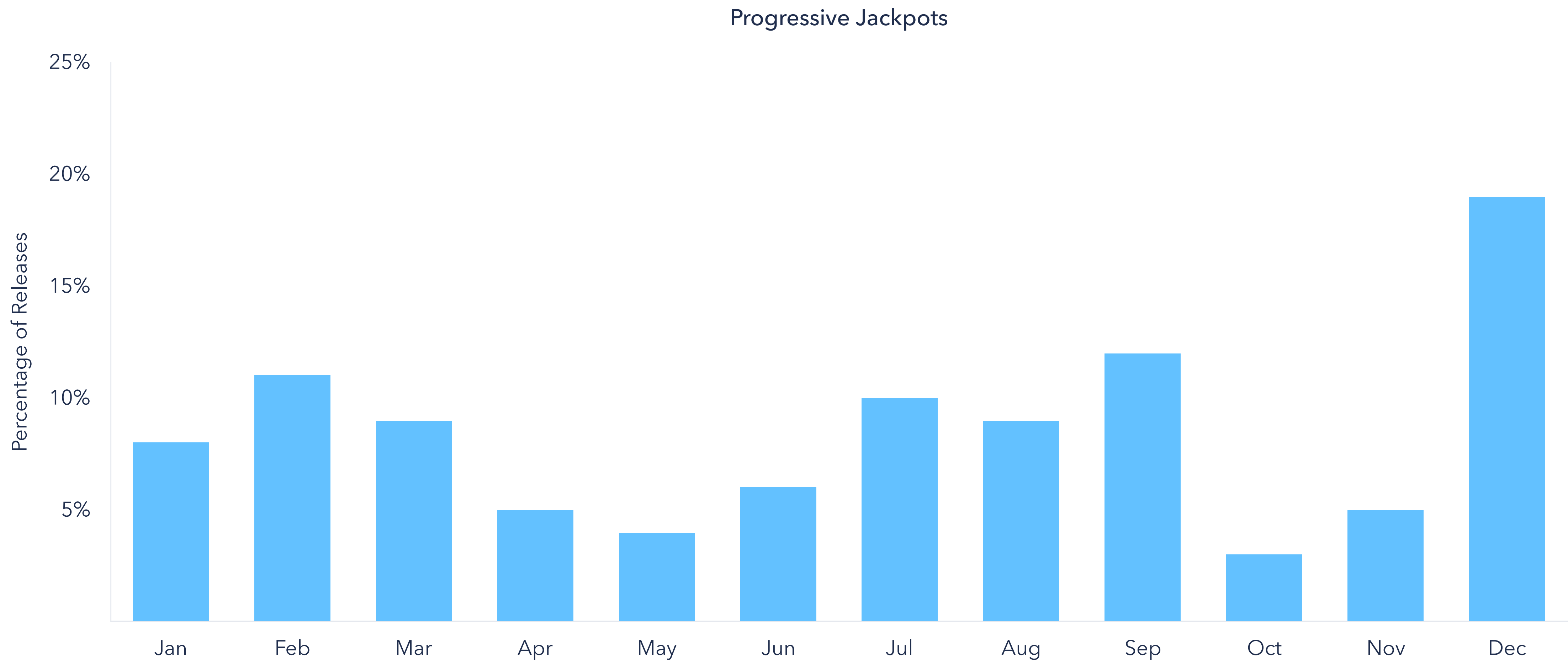
Wheels were trending through the middle of 2019 but have since declined in popularity. Only 10% of machines released in November and December included wheels, down from a peak of 20% in August.



JACKPOTS

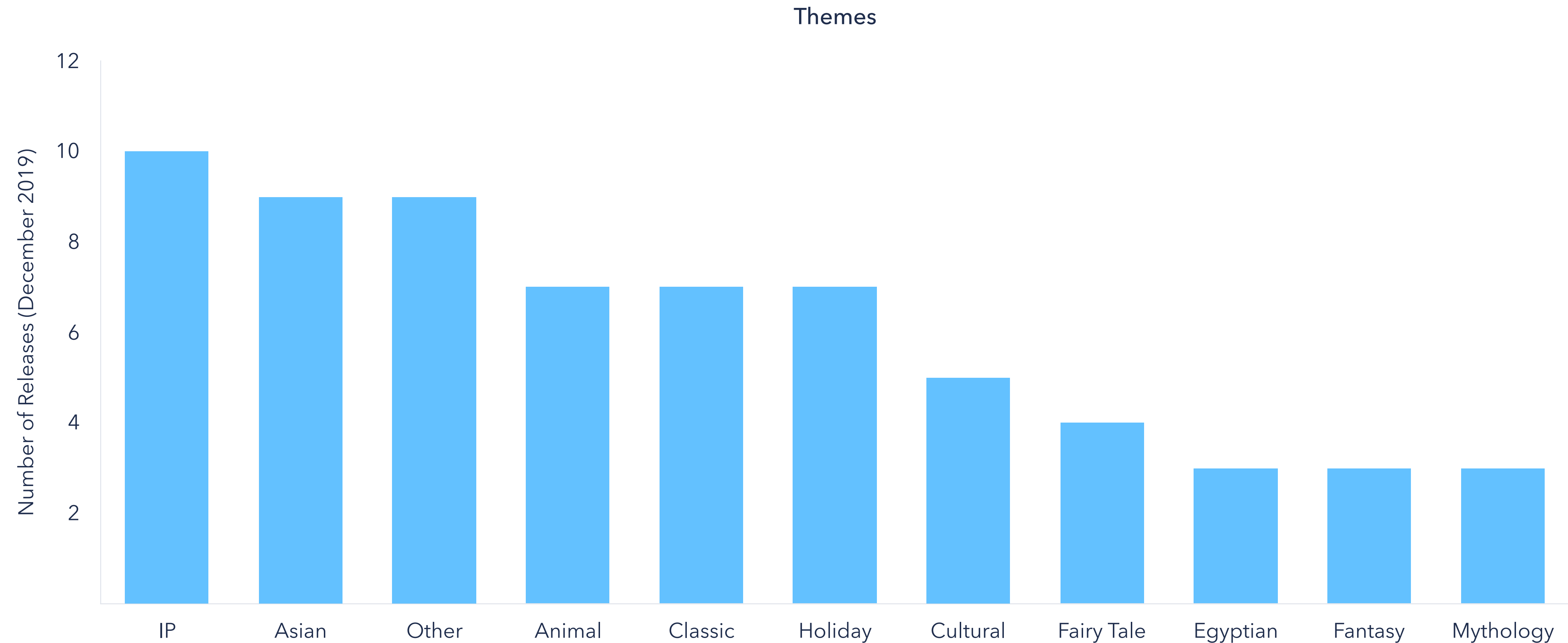


Progressive jackpots spiked in December, appearing in 19% of machines released by tracked apps.



THEMES

IP content continues to be the top theme for new machines. Asian- and classic-themed machines shot up in December by 50% and 133%, respectively, compared to November.

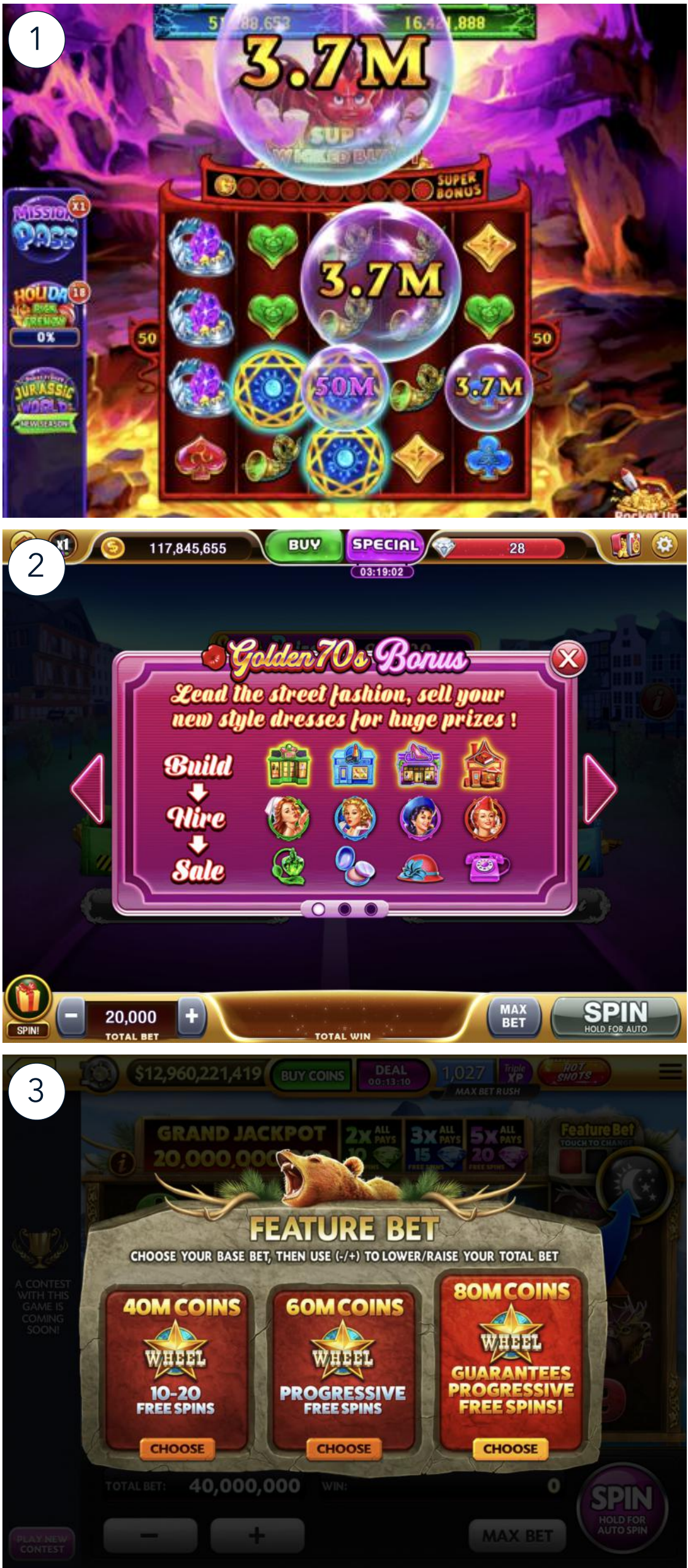


MARKET WATCH



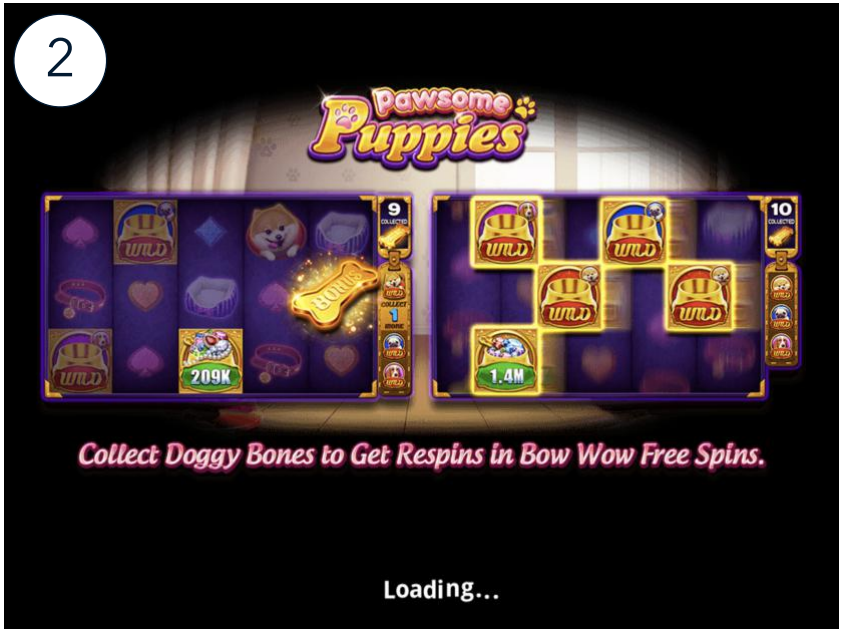
NOTABLE RELEASES I

App	Machine	Description
Cash Frenzy	Super Wicked Blast	<ul style="list-style-type: none">Bubble symbols containing coin values randomly appear on the screen (video).Bubbles rise each spin.Landing a star symbol under a bubble pops the bubble and awards the bubble's value (1).
	Golden 70s	<ul style="list-style-type: none">Players choose to build a new shop or hire employees for existing shops (2).To complete each task, players must collect symbols within a specified number of spins.If players run out of spins, a robber steals their progress.Players can use police to remove robbers and activate free spins.Employees can sell items to trigger a bonus.
Caesars Slots	Kodiak Mountain	<ul style="list-style-type: none">Three tiers of bets activate different rewards for a wheel spin bonus (3).The lowest tier offers 10-20 free spins with 1x-5x multipliers.The middle tier offers a progressive number of free spins with 2x-5x multipliers.The highest tier guarantees a progressive number of free spins with 2x-5x multipliers and contains a grand jackpot.Landing three or more wheel symbols triggers the bonus.



NOTABLE RELEASES II

App	Machine	Description
Cashman Casino	Forbidden Gaze	<ul style="list-style-type: none">• Paid spins occur on a 10-spin counter.• Scatter symbols leave behind sticky frames (1).• Landing a scatter symbol on a sticky frame increases that frame's level.• All sticky frames become wilds every 10th spin (video).• Wilds are multiplied by frames' levels.• Reels reset after the 10th spin.• Collecting scatter symbols fills a meter.• Filling the meter awards free spins in the reel configuration shown on the meter.• Sticky frames and wilds do not appear during free spins.
	Pawsome Puppies	<ul style="list-style-type: none">• Landing three or more scatter symbols triggers free spins.• During free spins, players collect bones to turn scatter symbols into wilds (2).• Turning all scatter symbols into wilds triggers respins.• Each spin, wilds move left one reel.• Respins continue as long as any wilds remain on the reels.
Gold Fish Casino	Up Up and Away Monopoly	<ul style="list-style-type: none">• Landing three bonus symbols awards one shot in a cannon mini-game.• Players can earn up to 30 shots in a single spin.• During the mini-game, players tap the screen to fire the cannon (3).• Shots move along a path of prizes and award the prize they land on (video).• Prizes include coins, six kinds of bonuses, and a free shot with a 2x multiplier.
	Jewel of the Dragon	<ul style="list-style-type: none">• During play, randomly shaped wild "jewels" fall from the top of the reels (video).• Jewels that land on reels convert symbols to wilds in the shape of the jewels.• Landing three diamonds triggers a pick'em bonus.• During the pick'em bonus, players pick one of three jewels to drop onto the reels (4).



NOTABLE RELEASES III

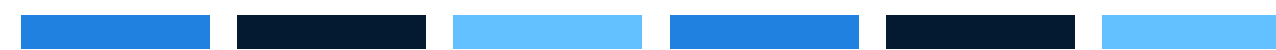
App	Machine	Description
Heart of Vegas	Emeralds of Egypt	<ul style="list-style-type: none">Landing identical god symbols on reels 1 and 2 awards all cash value symbols on reels 3, 4, and 5 (1 and video).
House of Fun	The Legend of Z	<ul style="list-style-type: none">Landing a hero symbol on eight or more positions of reel 1 triggers three respins (video).Only hero and coin symbols appear during respins.Spins that land at least one symbol award one additional respin.Coin symbols turn into one of four power-ups after landing.Power-ups can fill adjacent positions, award jackpot wheel spins, add extra rows of hero symbols, or increase the value of hero symbols (2).All non-jackpot power-ups become hero symbols at the end of the respins.
Lightning Link Casino	Cash Spark	<ul style="list-style-type: none">Spiked ball symbols can land on reels 2, 3, and 4.Landing a spiked ball “activates” all adjacent cells for the next three spins (3).During these three spins, landing another spiked ball activates additional cells and resets the spin counter.Cells activated during free spins remain active for the duration of the free spins.Players are rewarded for any gems that land on active cells.Cells that have been activated by multiple spiked balls add multipliers to gem rewards.

Quickly review all features and machines

- Filter the [Library Tool](#) by month and year to see all new releases.



NEW L&G CAPABILITIES



FEATURE DATABASE TOOL: NOTIFICATIONS

Stay on top of the latest apps, features, events, and more using our new email notifications tool in the Feature Database. Log in to your Liquid and Grit account to get started.

How to Use Notifications

1. Go to the [Feature Database](#) and create a search.
2. Click on the "Add Filter Notification" button.
3. Create a name for your notification.
4. Choose when and how often you want to receive notification emails.
5. Click "Save".
6. Click "My Notifications" to view, edit, or delete notifications.

Suggested Notifications

- [All slots machines](#) (tracked apps only)
- [Playtika apps](#) Slotomania, House of Fun, and Caesars Slots
- [Big Fish Games apps](#) Big Fish Casino and Jackpot Magic Slots
- [Playstudios apps](#) POP! Slots, myVegas Slots, and my KONAMI Slots

Note: If you have access to Liquid and Grit through a company-wide subscription, email support@liquidandgrit.com to set up an account.



FEATURE DATABASE: DATA TOOL

Identify design trends in top-grossing casino apps using the Data Tool in the Feature Database.

How to Use the Data Tool

1. Log in to your Liquid and Grit account.
2. Go to the [Feature Database](#).
3. Click on the "Data" tab.
4. Filter by "Casino" and "Content".
5. Click the blue "Download CSV" button.
6. In Excel, use the "Text to Columns" option on the "Categories" column.
 - This data export will be adjusted soon.
7. Use a pivot table to analyze the information.

Suggested Data Exports

- [Slots features, events, and content](#) (tracked apps only)
- [Slots machines](#) (tracked apps only)
- [Casino events](#) (tracked apps only)
- [Casino features](#) (tracked apps only)
- New machine releases from [Slotomania](#), [House of Fun](#), and [Caesars Slots](#)
- New machine releases from [Big Fish Casino](#) and [Jackpot Magic Slots](#)

Note: If you have access to Liquid and Grit through a company-wide subscription, email support@liquidandgrit.com to set up an account.



SLACK SHARED CHANNELS

Get answers fast with a shared Liquid and Grit Slack channel. Ask us questions directly, download resources, start a discussion, and receive our monthly reports—all from your company's existing Slack accounts.

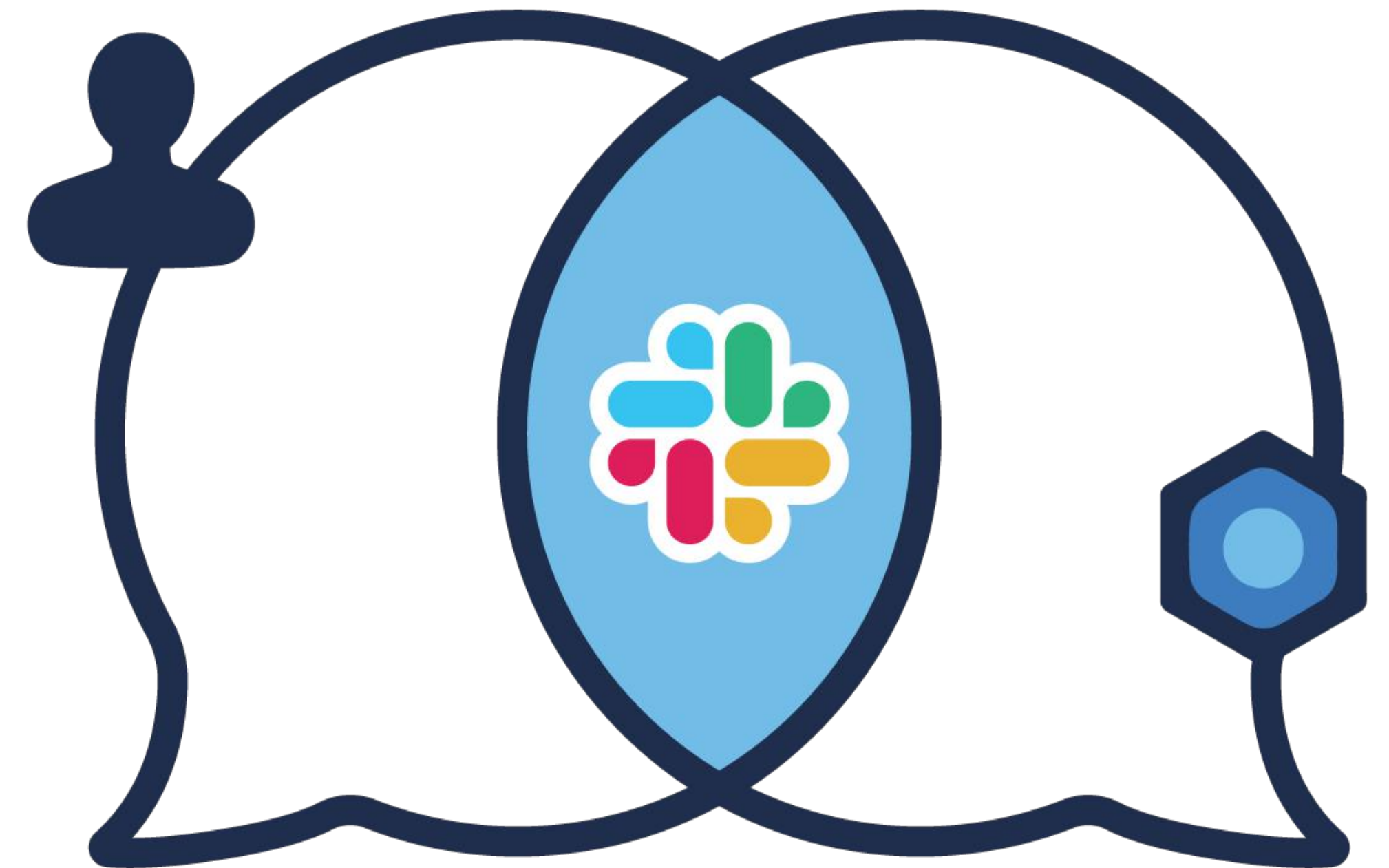
How to Set Up a Channel (Estimated Time: 15 Minutes)

1. Discuss the [shared channel](#) with a Slack admin.
2. [Email us](#) to receive a shared channel link.
3. Have the Slack admin accept the invitation.
4. Add members to the channel.

Potential Applications

- Request RTP spreadsheets.
- Get advice on Feature Database searches.
- Add users to your account.
- Discuss recent reports.
- Receive hilarious GIFs.

Note: If you have access to Liquid and Grit through a company-wide subscription, email support@liquidandgrit.com to set up an account.



APPENDIX



LIQUID AND GRIT SLOTS PERSONAS

Participants from the U.K. and U.S. (N=1,299) were surveyed about their mobile gaming use. The data produced five personas with distinct patterns of slots preferences and playing habits.

Demographics					
	Fame Frank	Money Mike	Daydreamer Denise	Gambler Gail	Sensation Serena
Size	21%	22%	27%	19%	11%
Women	50%	51%	66%	60%	55%
Age	32 mean / 30 median	34 mean / 32 median	35 mean / 34 median	35 mean / 33 median	35 mean / 32 median
Education	3.5	3.3	3.5	3.2	3.3
Money Spent	4.2	4.9	3.5	5.4	5.8
Play Time	5.0	4.5	5.0	4.9	6.5



* The education, money spent, and play time numbers represent the relative value of each category compared to other player personas.

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
<p>Market Research Quadrant Strategies</p> <p>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.</p> <p>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.</p>	<p>Player Personas Kinrate Analytics</p> <p>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.</p> <p>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.</p> <p>The products of Kinrate Analytics have been developed in university-led research projects in collaboration with economists, psychologists, game scholars, and data scientists.</p>	<p>Mobile App Store Intelligence Sensor Tower</p> <p>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.</p> <p>Clients harness Sensor Tower’s suite of app intelligence tools to:</p> <ul style="list-style-type: none">▸ 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.



“Art washes away from the soul the dust of everyday life.”

– Pablo Picasso

LiquidandGrit.com



Brett.Nowak@LiquidandGrit.com

