



The 2017

# User Engagement Top 100 Report

## Mobile Gaming



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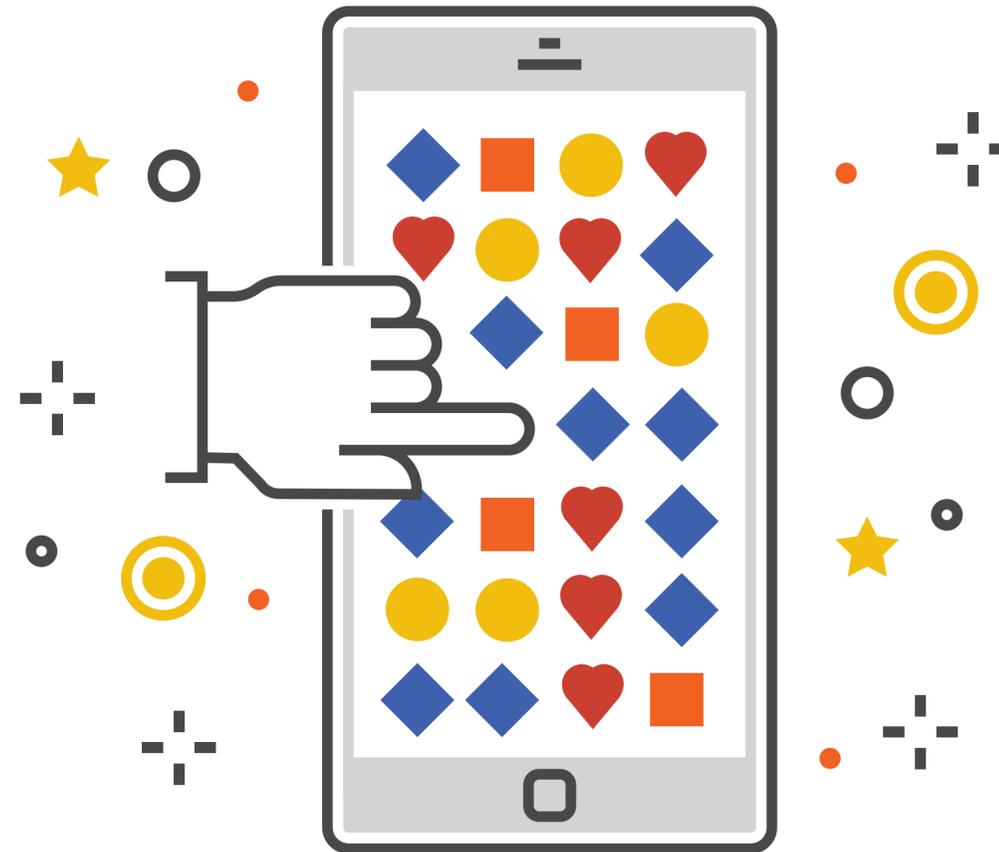
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# Introduction

Whenever new market research discusses mobile applications, gaming dominates the conversation. Here are just a few mind-boggling stats about the impact of this industry.

- **62 percent** of smartphone owners install games within a week of getting their phones, a higher percentage than any other type of app.
- Consumers spent **\$41 billion** on mobile games in 2016, surpassing PC and consoles as the largest game segment.
- Mobile gamers spend an average of \$87 per year on in-app purchases and up to **\$550 annually** on top grossing games, like *Game of War: Fire Age*.



How are game publishers able to keep customers so engaged? In this report, we analyzed the push messaging strategies adopted by the top 100 freemium mobile games in the United States to study how they communicate with their customers.

We note how and when pushes were sent, as well as how push strategy varied by game genre. We also examine message content, providing several case studies and recommendations about how to improve the mobile marketing of your own organization.

# Key Takeaways

We examined push notifications from the top 100 freemium mobile games on iOS devices. Here are our key takeaways from analyzing industry trends and how game genre and user activity affected messaging content and timing.

- **Push it, push it good.** Push notifications are widely adopted by mobile games. The majority (81 percent) of the top 100 sent out at least one push to new users.
- **Notorious RPG.** Of the total number of pushes received by all 100 games, 61 percent came from role playing games. 29 percent were sent by sports/arcade games, 6 percent by puzzle games and 4 percent by simulation games.
- **Mo' pushes, mo' problems.** The number of total pushes typically increased in the 24-48 hours after logging into the app. However, a few errors caused abnormal spikes, such as 50 simultaneous notifications from *Mobile Strike* on day six.

This report is for growth marketers interested in implementing high-performing mobile-first campaigns. In it, we present insightful statistics about the mobile gaming industry and include real-world messaging examples from the country's top grossing freemium games.

If this report piques your interest and you'd like to learn how to advance your own mobile marketing campaigns, please reach out to us.

*Iterable empowers growth marketers to create world-class user engagement campaigns throughout the full lifecycle, and across all channels.*

*Segment users, build workflows, automate touchpoints and test strategies at scale without engineering support.*

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# Methodology

We studied the top 100 grossing games<sup>1</sup> of the Apple App Store<sup>2</sup>, focusing solely on freemium games with in-app purchases<sup>3</sup>. For the purpose of this study, each mobile game was categorized as either Puzzle, Simulation, Sports/Arcade, or Role Playing Game (RPG).

	<b>Puzzle</b> Solve mental challenges of increasing difficulty <i>Candy Crush Saga, Panda Pop, Cookie Jam</i>
	<b>Simulation</b> Build and manage a virtual environment <i>ROBLOX, Rollercoaster Tycoon, Design Home</i>
	<b>Sports/Arcade</b> Compete in a recreational or gambling activity <i>8 Ball Pool, MADDEN NFL Mobile, World Series of Poker</i>
	<b>Role Playing Game (RPG)</b> Embody a character and complete a series of quests <i>Game of War: Fire Age, Mobile Strike, Clash of Clans</i>

After downloading and launching each app, we analyzed their push messaging over the course of two weeks. Here are the questions that drove this report’s methodology.

- Does the game request to send push notifications? If so, at what point does the user receive the request?
- How many pushes are sent per day, and is there a correlation between user activity and push frequency?
- Is there anything interesting to note about the content of the push notifications?

This research report was designed to analyze select mobile marketing tactics in a brief timespan for the purpose of creating a snapshot of the industry-leading gaming companies.

Readers should note that Iterable’s recommendations for mobile messaging are based on the limited experience of this study, which is not meant to be comprehensive in its analysis and does not reflect the official position of any company listed.

<sup>1</sup> For the scope of this report, we removed three games from the original top 100 list because they were either premium or foreign language games. The next three games in the list were substituted to complete our top 100.

<sup>2</sup> This list was determined based on the Apple App Store rankings on February 28, 2017.

<sup>3</sup> Unless otherwise noted, these companies are not Iterable customers nor have they sponsored this report in any way.

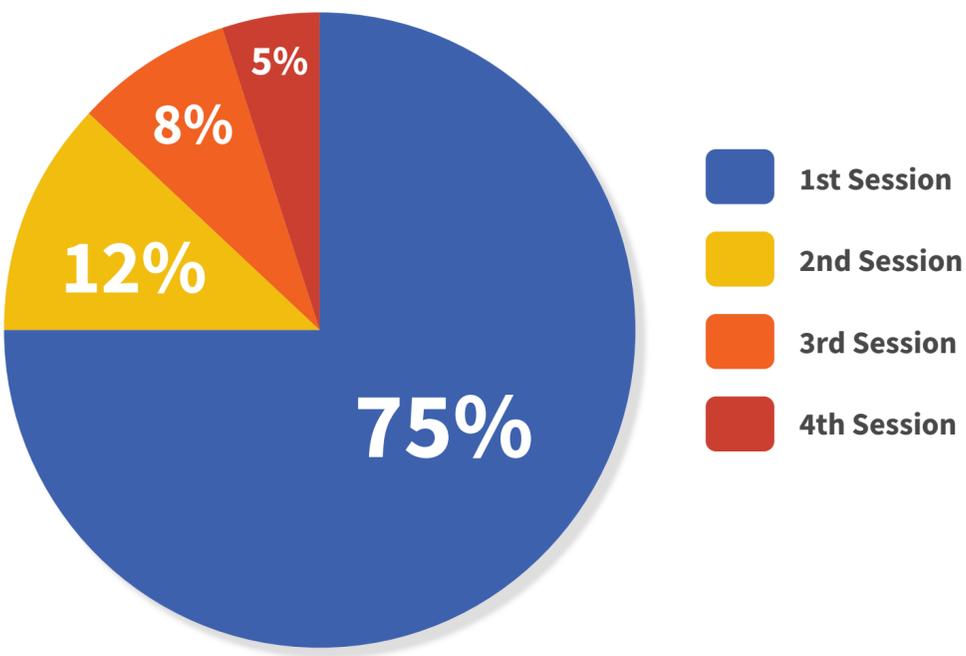
# Push Strategy Adoption of the Top 100 Mobile Games

## How They Were Sent: Permission Requests

Push notifications are a widely adopted way to message players: 81 of the top 100 freemium mobile games sent at least one push to users. Of those games, 75 percent requested permission to send push notifications immediately after launching the app.

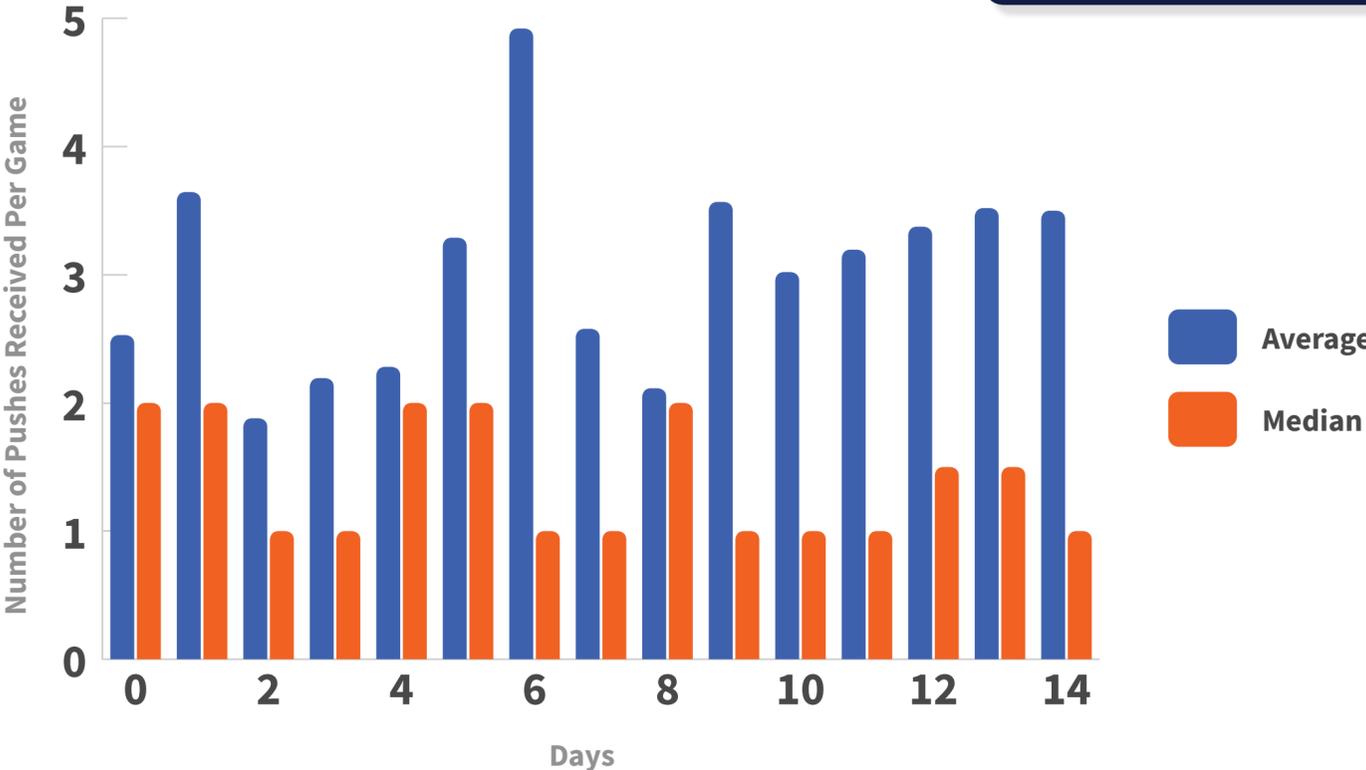
It's not a common practice to wait to request permission. Only 12 percent of games asked to send pushes after opening the app a second time, 8 percent requested after a third app launch and the remaining 5 percent asked after playing a fourth session.

Of the games that asked to send push notifications, when did they make the request?



**TIP**  
*The early Angry Bird gets the worm. Because app usage drops off precipitously in the days after an initial download, it's no wonder why most mobile games request to send push notifications immediately. Don't wait to communicate!*

Average vs. Median Pushes



Once permission was granted, then the floodgates opened. Over the course of two weeks, we received 1,817 total push notifications from all 100 mobile games, for an average of about 18 messages per game or 1.3 messages per game per day.

However, a few outliers that messaged most frequently skewed this data: the median number of pushes was only six per game. This amounted to one push being sent by each game every 2.3 days.



**Set expectations at the outset.**  
 Because messaging strategy can differ widely even within an industry, it's important to set expectations early. Ask your users what types of messages they'd like to receive to avoid a dropoff in push permission acceptance.

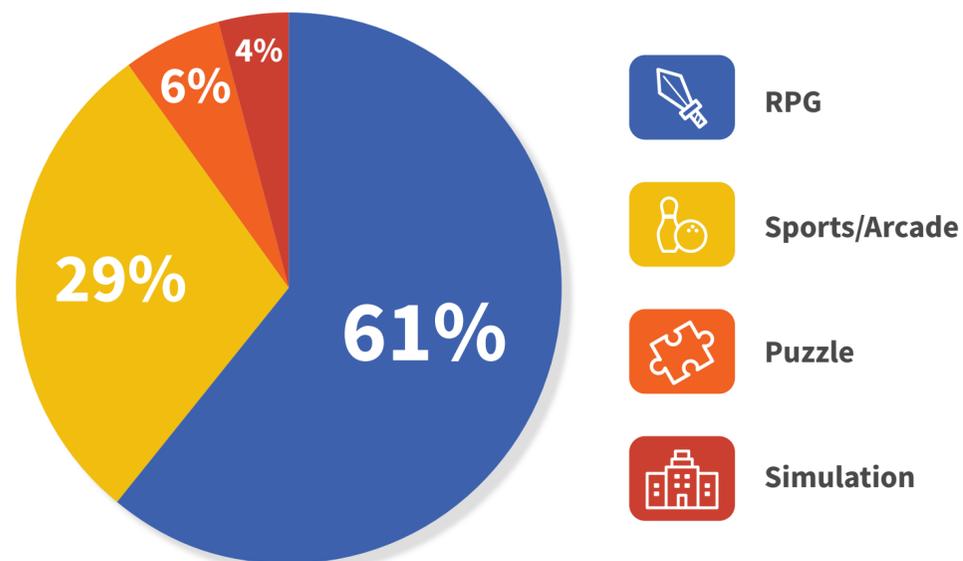
## Who Sent Them: Game Genre Breakdown

A closer look at the data revealed greater variance between game genres. Role-playing games were by far the most active in regards to push messaging, while simulation games sent the fewest number of pushes.

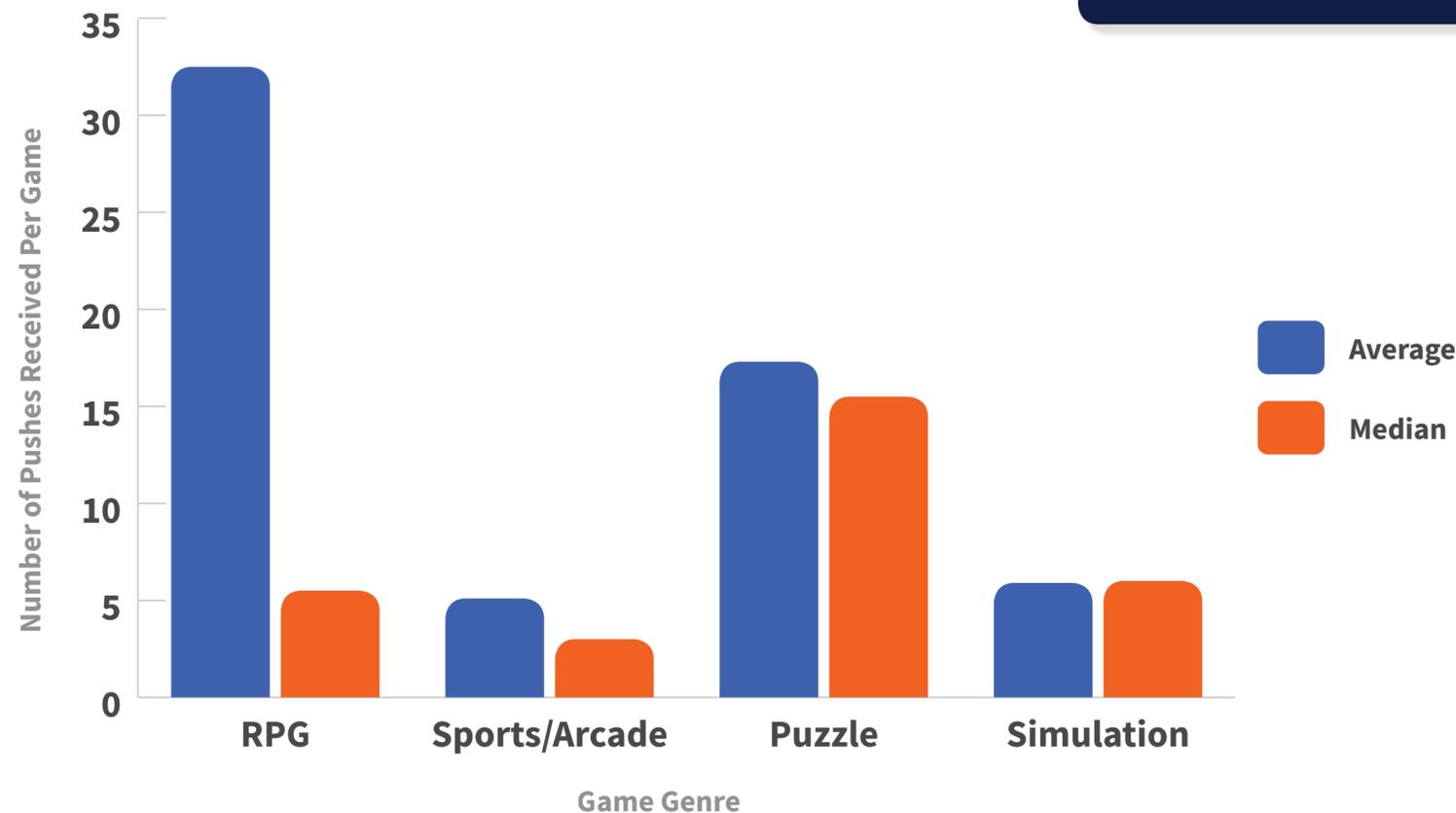
Of the total number of notifications received by all 100 games, 61 percent came from RPGs. 29 percent were sent by sports/arcade games, 6 percent by puzzle games and 4 percent by simulation games.

Notably, the genre distribution of the top 100 does not mirror push frequency. Although RPGs sent the majority of pushes, they only consist of 34 percent of the leading games, followed by sports/arcade (30 percent), puzzle (23 percent) and simulation (13 percent).

Push Notifications by Game Genre



Average vs. Median by Game Genre



Even within RPGs, several outliers skewed the results: the average number of pushes sent in two weeks was approximately 32.5 per game, but the median number was only about 5.5 per game. The other genres were more consistent, with the average number of push notifications ranging from approximately 5 per sports/arcade game to 17 per puzzle game.

**Respond in real time.**  
 It can be difficult for game publishers to personalize messages with specific user data when player progress can change so rapidly. The right growth marketing technology can make real-time response easier by simplifying segmentation and scheduling.

## When They Were Sent: Push Timing

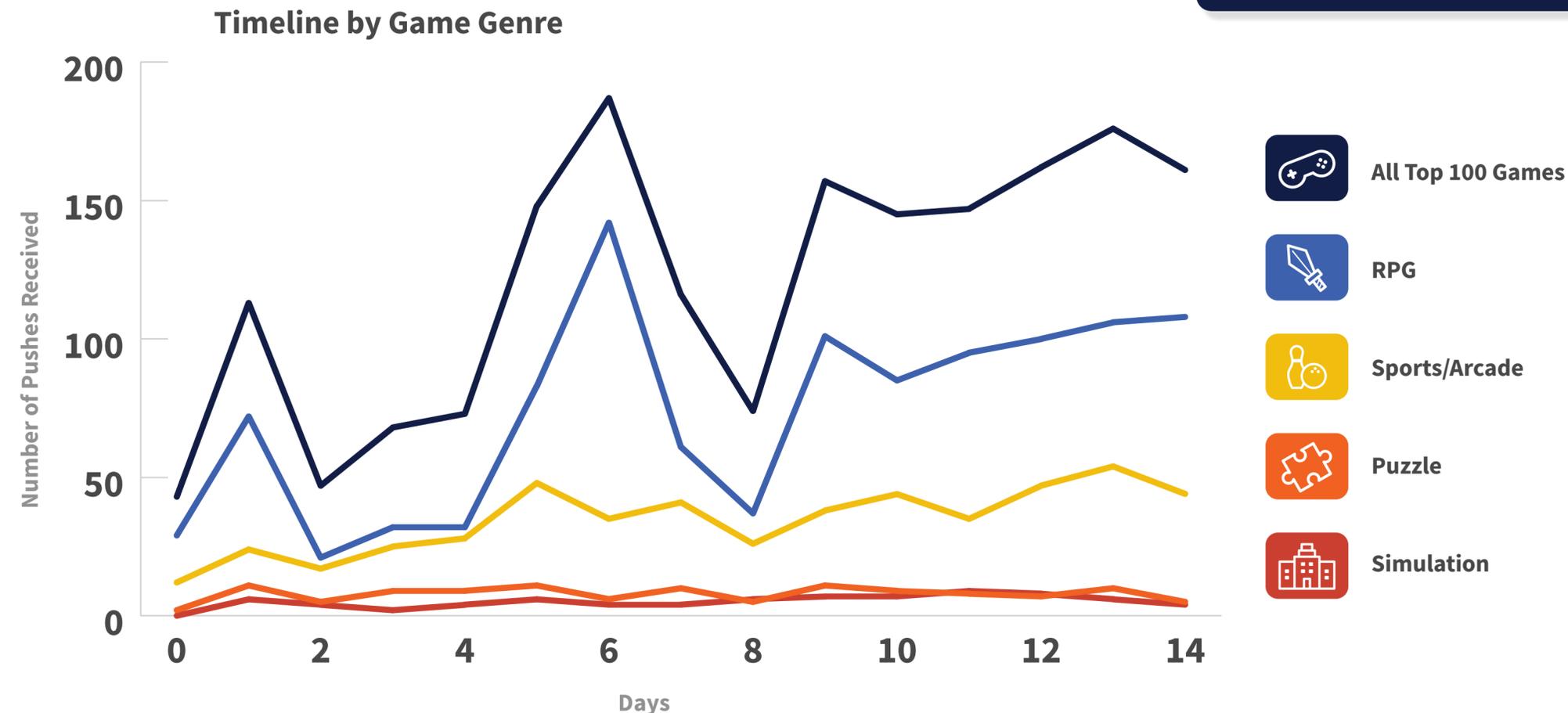
While push messaging strategy varies by game genre, it is also determined by the level of user activity across the lifecycle.

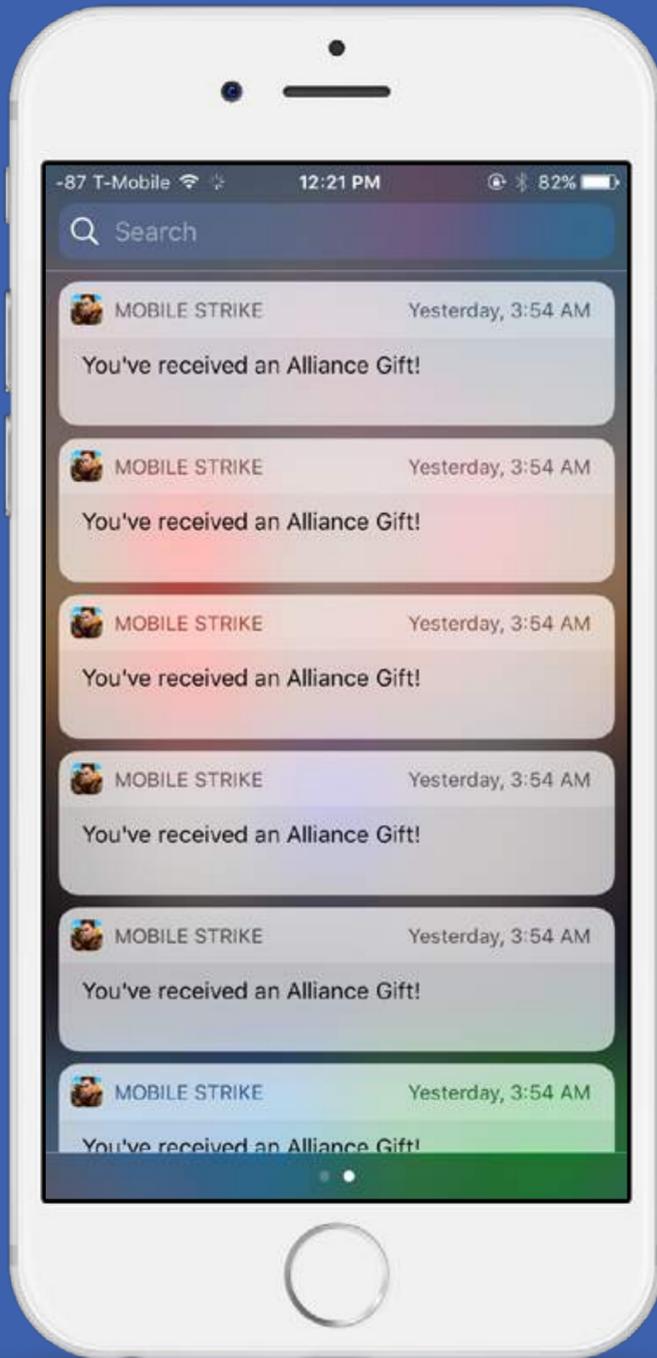
It seems that it is difficult for mobile game publishers to message users in real-time: the data shows that the number of pushes increases in the 24-48 hours after a user opens the app.

Over the course of two weeks, messaging was lowest on day zero when the app was downloaded. Only 43 push notifications were sent on this day, presumably because permissions had just been granted.

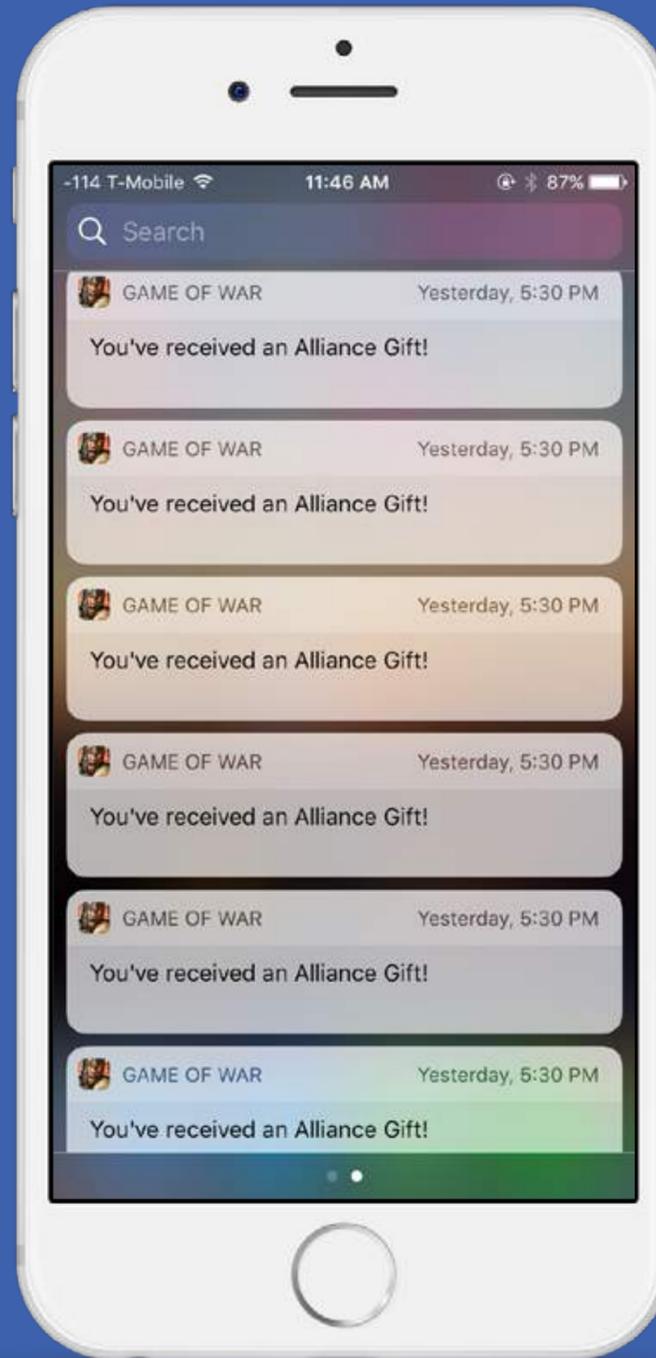
Afterward, message frequency ebbed and flowed like the tide, depending on how active the user had been.

We logged into each game on days zero, four, eight and 11, typically when push frequency was low. Push notifications then spiked in the days after, with a peak of 187 total messages received on day six.





**Fig. 1: This timing error is a huge strike against Mobile Strike.**



**Fig. 2: Game of War: Fire Age also needs to slow down on the alliance gift-giving.**

However, when drilling deeper into the data, it becomes clearer that this messaging trend across the user lifecycle is determined primarily by RPGs. There is less variation over time with sports/arcade games, and the push frequency of puzzle and simulation games is even more consistent.

More specifically, a few timing glitches caused the spikes in RPG activity. On day six, *Mobile Strike* single-handedly disrupted overall trends with 50 simultaneous pushes that all read, “You’ve received an Alliance Gift!” (Fig. 1).

These outlying incidents may be a technical issue of the game publisher, Machine Zone. Another of its role-playing games, *Game of War: Fire Age*, sent an onslaught of notifications with the same message (Fig. 2). The right growth marketing platform can prevent such errors with sophisticated segmentation and workflows.

## What Was Sent: Message Content

User engagement strategies vary by game genre. Because real-time strategy plays a major role in RPGs, they message more frequently than other genres. *King of Avalon: Dragon Warfare* sent over 100 pushes in two weeks, typically every two hours (Fig. 3).

Blasts of this kind are usually generic, attempting to entice gamers with virtual gifts. Players must login quickly before the promotion expires, creating a sense of urgency.

Of course, it's not only RPGs that utilize these engagement methods. Turn-based puzzle games, like *YAHTZEE With Buddies* (Fig. 4), also motivate users to finish their sessions by claiming that time is running out.

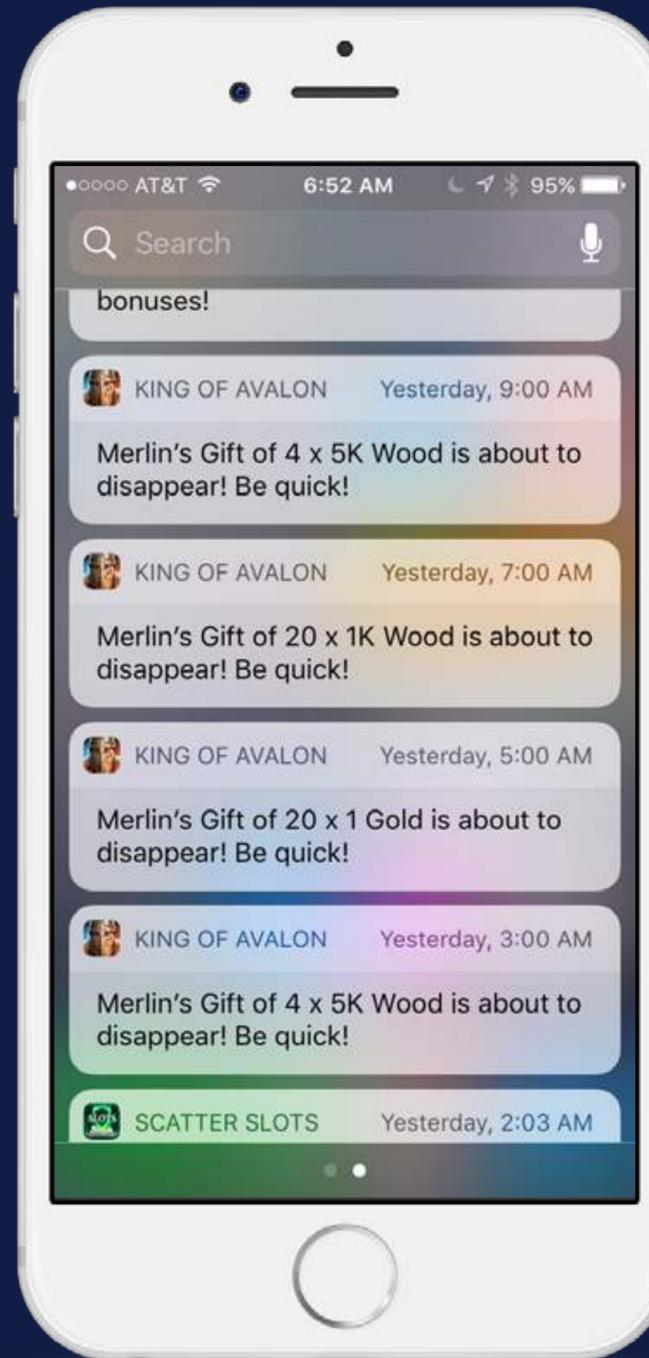
However, these two case studies demonstrate how important it is to vary messaging content. Blasting the same update every couple hours (or worse, multiple times at once as seen with *YAHTZEE With Buddies*' timing error) is bound to irk even the most loyal fan.



### TIP

#### **Get creative with copy.**

*It's easy to get into messaging ruts, so don't be afraid to take risks and regularly evaluate what works. Even a simple change in sentence length and structure can set you apart from the companies that are phoning it in.*



**Fig. 3: *King of Avalon: Dragon Warfare* sends blasts on two-hour rotation.**



**Fig. 4: *YAHTZEE With Buddies*' timing error unleashes four similar pushes simultaneously.**

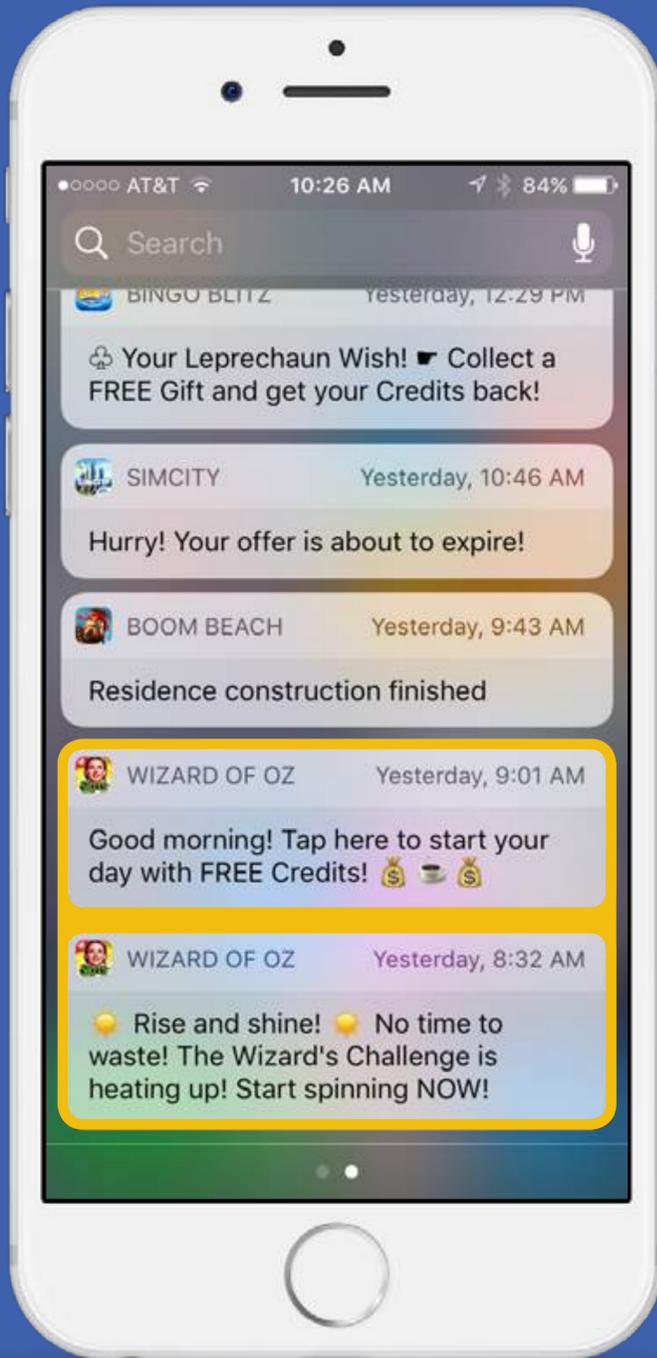


Fig. 5: Rise and shine with Wizard of Oz: Vegas Casino Slots' morning update.

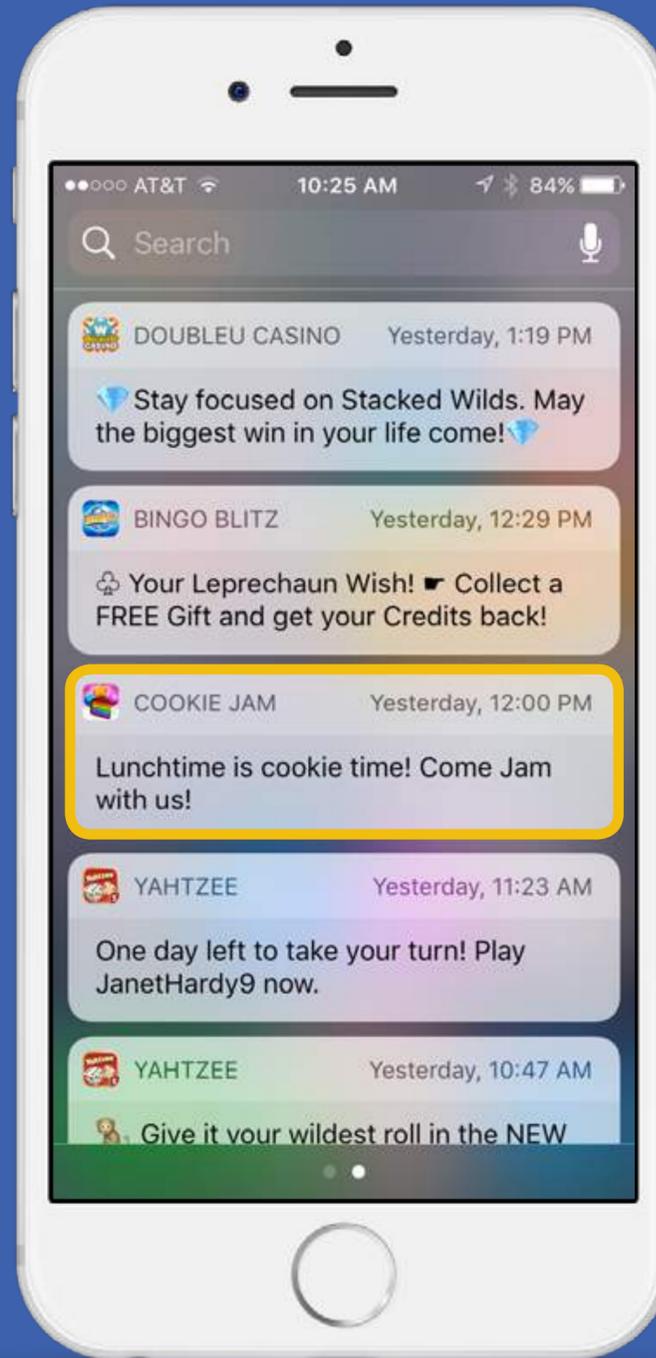


Fig. 6: Enjoy your lunch break with the popular puzzle game, Cookie Jam.

For games that are not turn-based or do not involve real-time strategy, regular reminders are often deployed at a specific time. *Wizard of Oz: Vegas Casino Slots* gets the day started with a couple notifications in the morning (Fig. 5), while *Cookie Jam* checks in with players at lunchtime (Fig. 6)

Matching the time of your reminder to your brand can actually strengthen a Pavlovian response, as seen with *Cookie Jam's* association with food. Players of this game may better remember their virtual cookies at a time when they could be eating real ones.



**TIP**

***Work hard, play harder.***

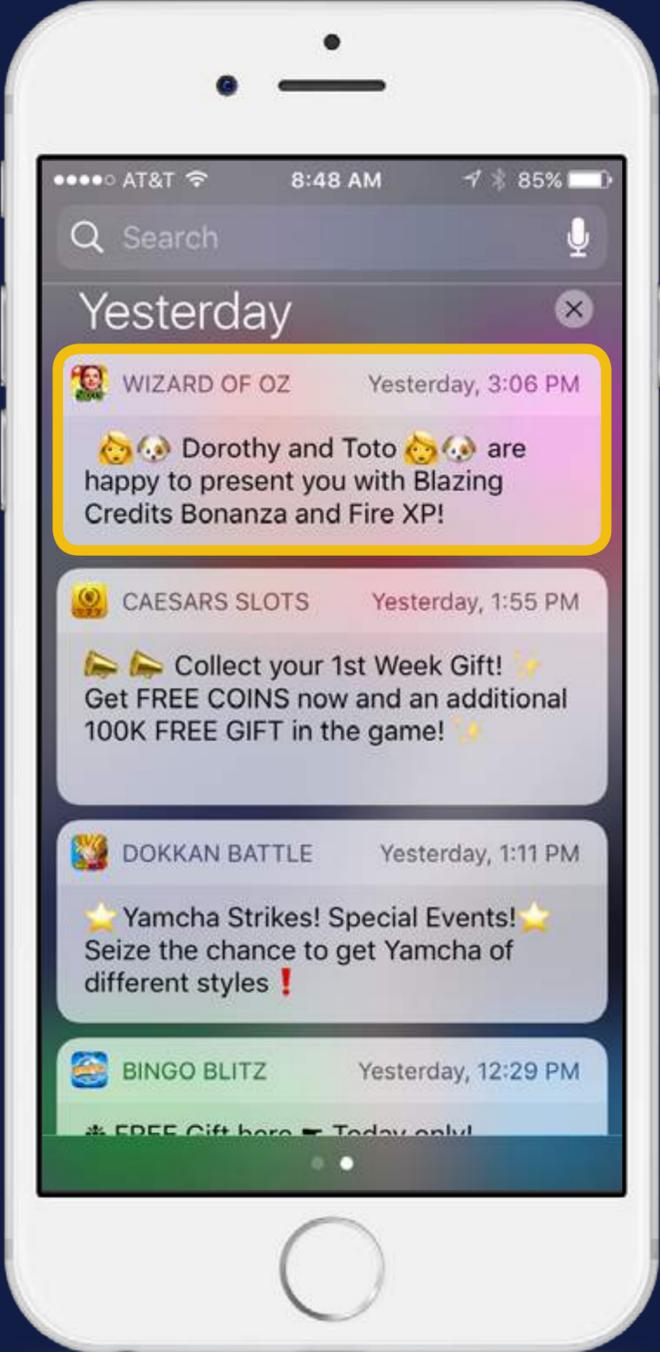
*It's important to remember that your customers have lives outside of your app. Schedule push reminders when a user is not preoccupied during business hours and is most likely to check their phone to achieve more conversions.*

Regardless of genre, most of the top 100 mobile games incorporated emoji into their messaging. Emoji can be an excellent way to strengthen brand association, as with Dorothy and Toto from *Wizard of Oz: Vegas Casino Slots* (Fig. 7), or to personify game characters, like the Jelly Queen from *Candy Crush Jelly Saga* (Fig. 8).

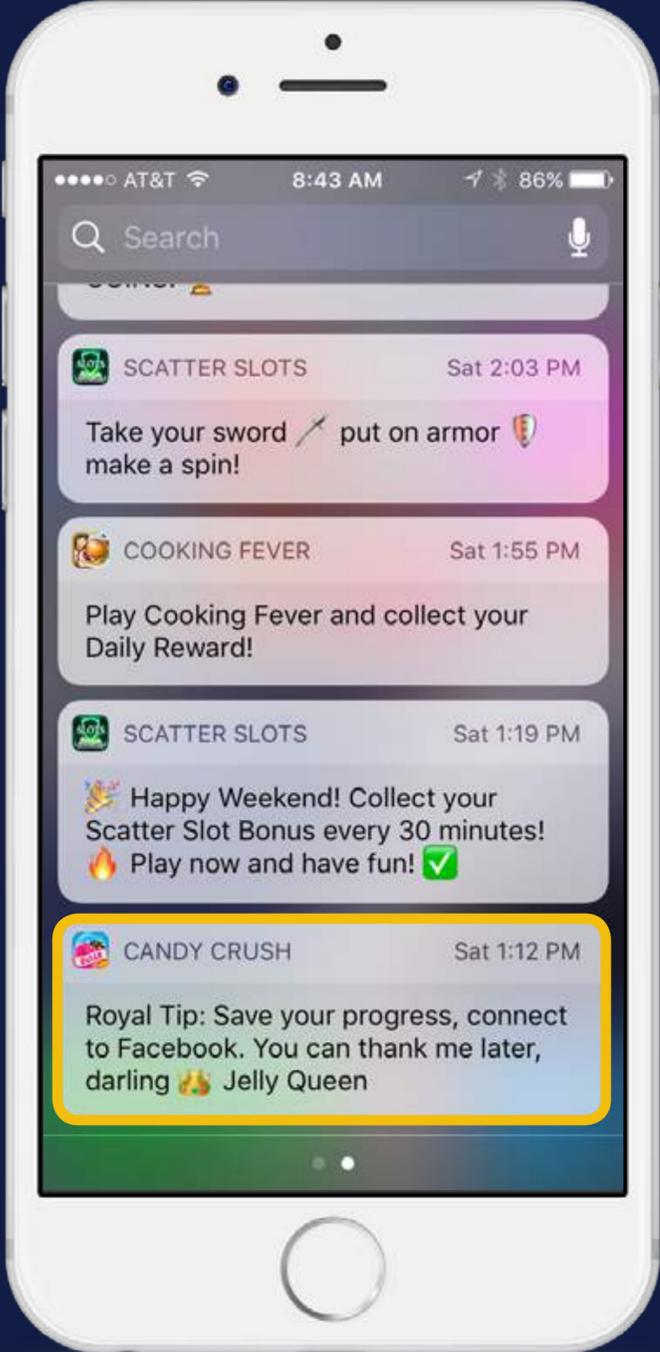
 **TIP**

**Happy faces = happy customers.**

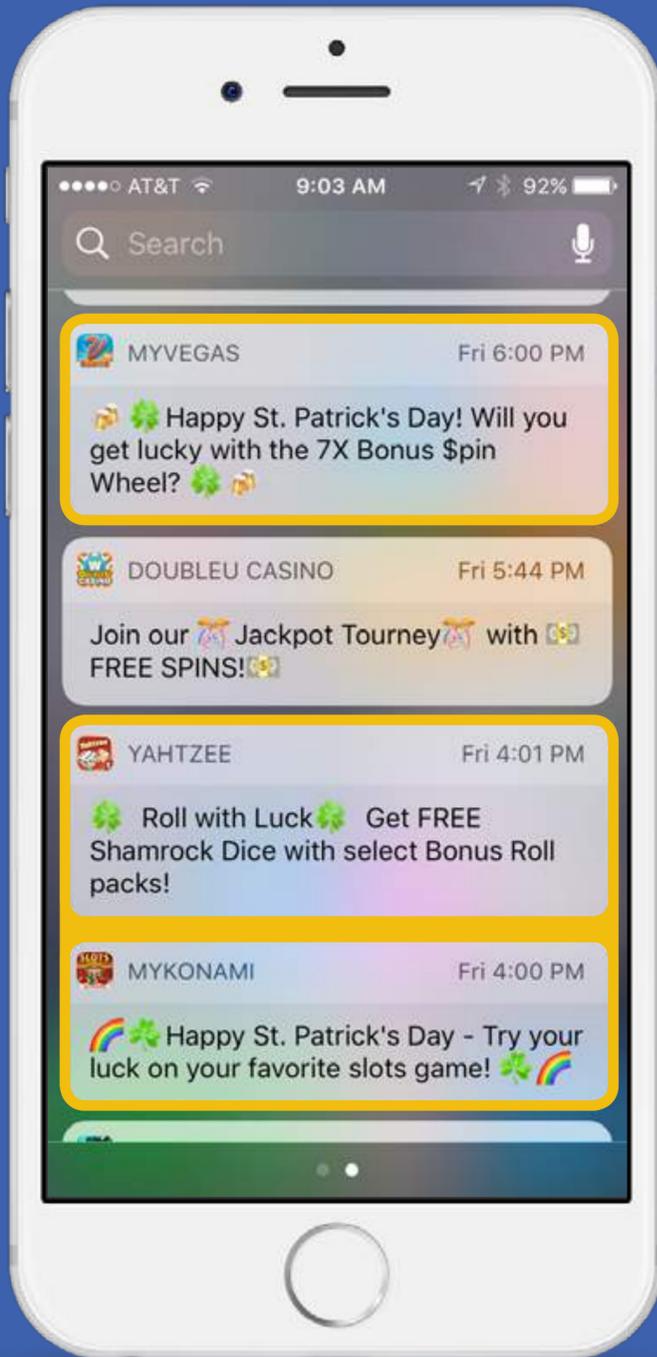
*Your customers are using emoji, so join the fun! When establishing a messaging strategy, determine which emoji best represent your brand and how to use them to build rapport with your audience.*



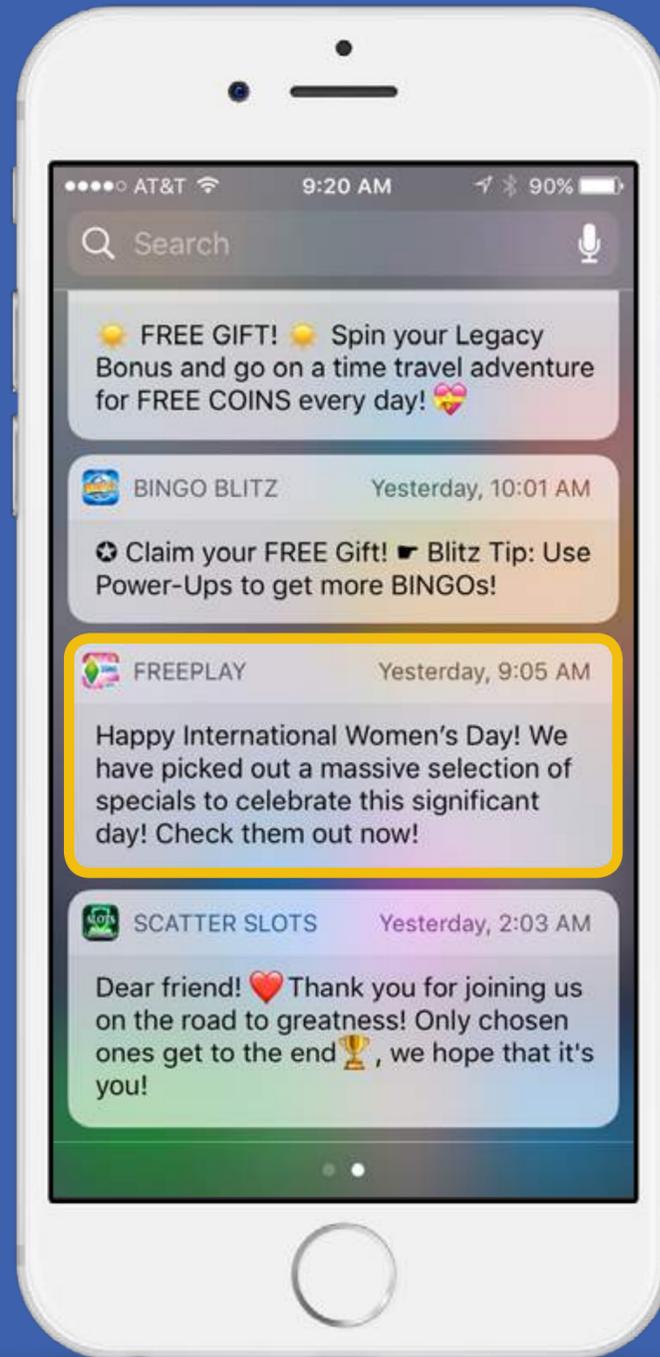
**Fig. 7: Dorothy and Toto get the emoji treatment in *Wizard of Oz: Vegas Casino Slots*.**



**Fig. 8: Jelly Queen shares tips and displays her crown in *Candy Crush Jelly Saga*.**



**Fig. 9: Mobile games offer chances to get lucky on St. Patrick's Day.**



**Fig. 10: The Sims FreePlay caters to its female users on International Women's Day.**

Another opportunity to include emoji is when sharing holiday promotions. Because our research took place during St. Patrick's Day, dozens of games celebrated with rainbows and four-leafed clovers (Fig. 9). Capitalizing on the luck of the Irish was an especially popular practice for gambling-oriented games, such as *myVEGAS Slots*.

However, not all holidays are as widely celebrated. Very few games made mention of International Women's Day on March 8, like *The Sims FreePlay* did in Figure 10. This particular gender-based disparity is likely due to a game's demographics.

The Sims franchise is well-known for having a large female audience compared to the industry-dominating strategy RPGs. Thus, it makes sense that the game ran a special promotion in support of this holiday.

TIP



***Every day is worth celebrating.***

*It's standard practice for B2C companies to run special holiday promotions, but looking beyond Memorial Day will make you more memorable. Get creative and wish your customers a happy Pizza Party Day!*

It was apparent that some games took the user lifecycle into account when sending push notifications. During the onboarding phase, *DoubleU Casino* was one of the games that took an opportunity to welcome new players (Fig. 11).

This welcome message was not the first we received from *DoubleU Casino*, but it stood out as an effective way to make new users feel special. This push encouraged gamers to play with their bonus chips in the hopes of persuading them to spend real money.

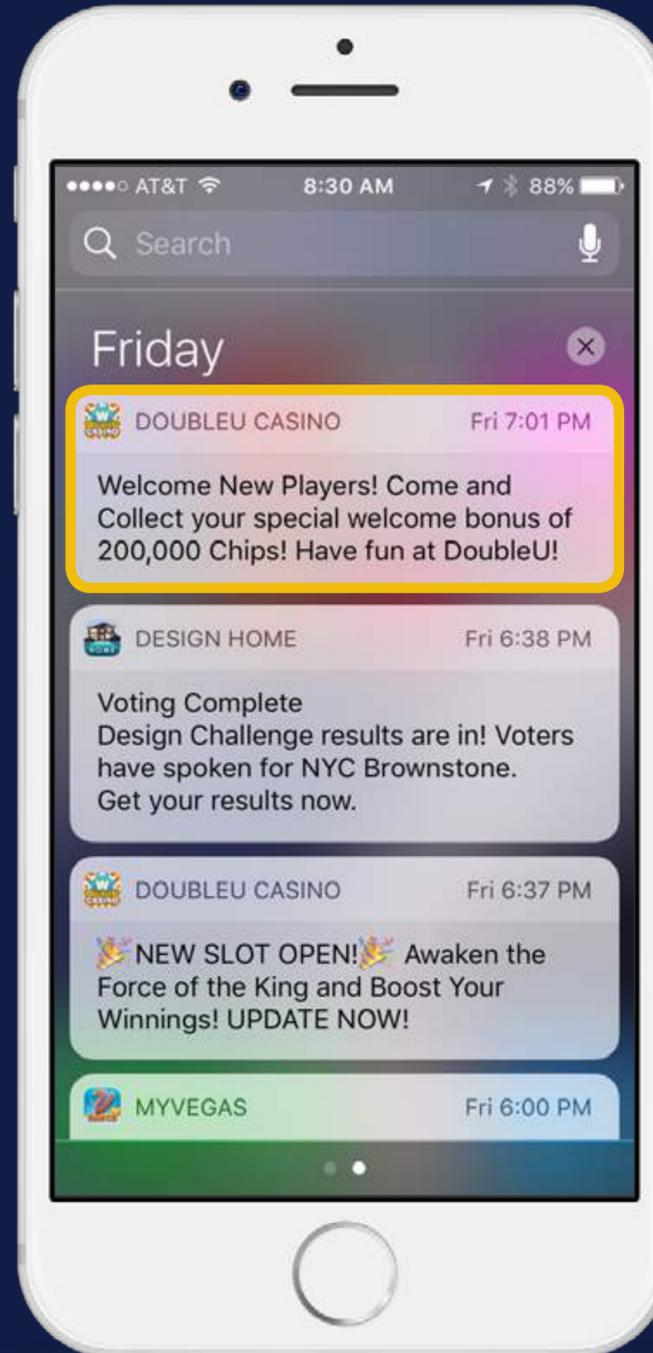
Eventually the honeymoon period wears off, and games must motivate users to come back and play. *Township* took note of a “2-day absence” in its re-engagement push (Fig. 12). Including this specific detail of a user’s lifecycle is a great example of targeted messaging that is more likely to result in increased engagement.

**Prepare past the honeymoon period.**

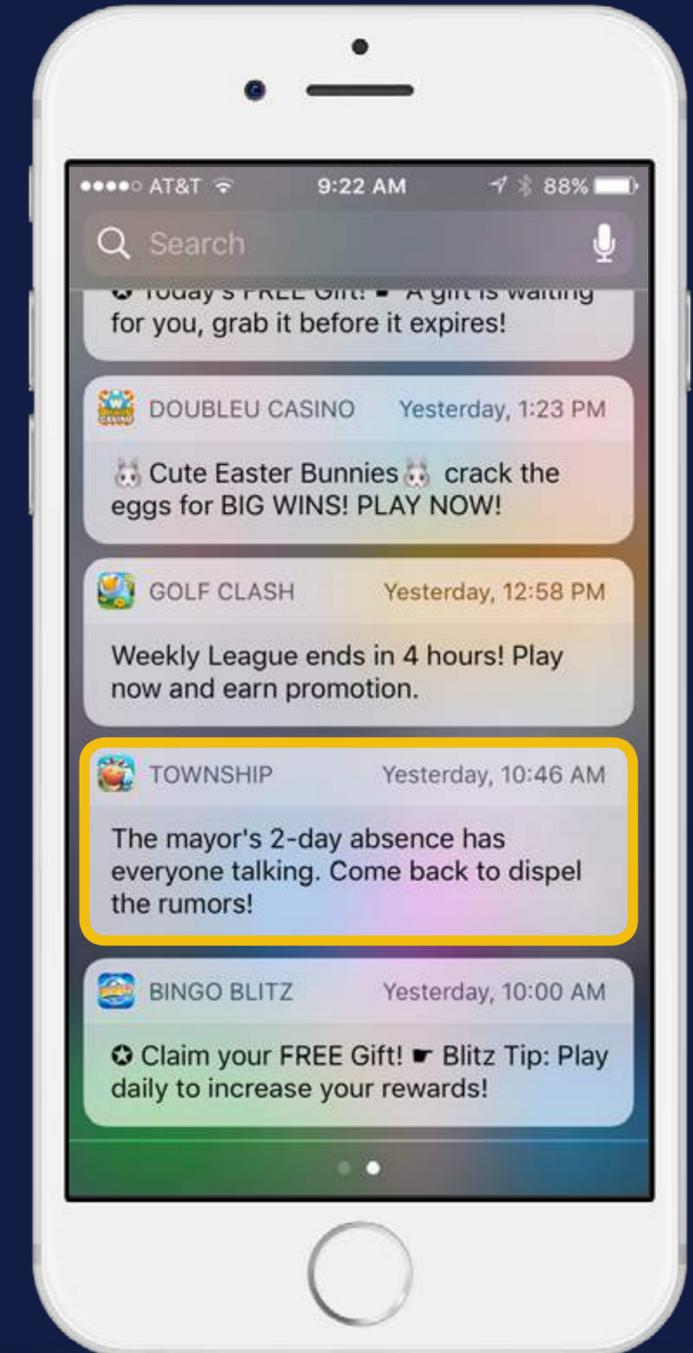
*All companies must compete for consumers’ ever-depleting attention spans, a fact that is especially apparent on mobile. Don’t take their initial interest for granted. Deploy designated campaigns to welcome and retain customers for the long term.*



**TIP**



**Fig. 11: DoubleU Casino offers a generous virtual gift to new players in its welcome message.**



**Fig. 12: Township references a player’s lapsed activity to encourage re-engagement.**



Fig. 13: Farm Heroes Saga sets sights high in its push to reach level 27.

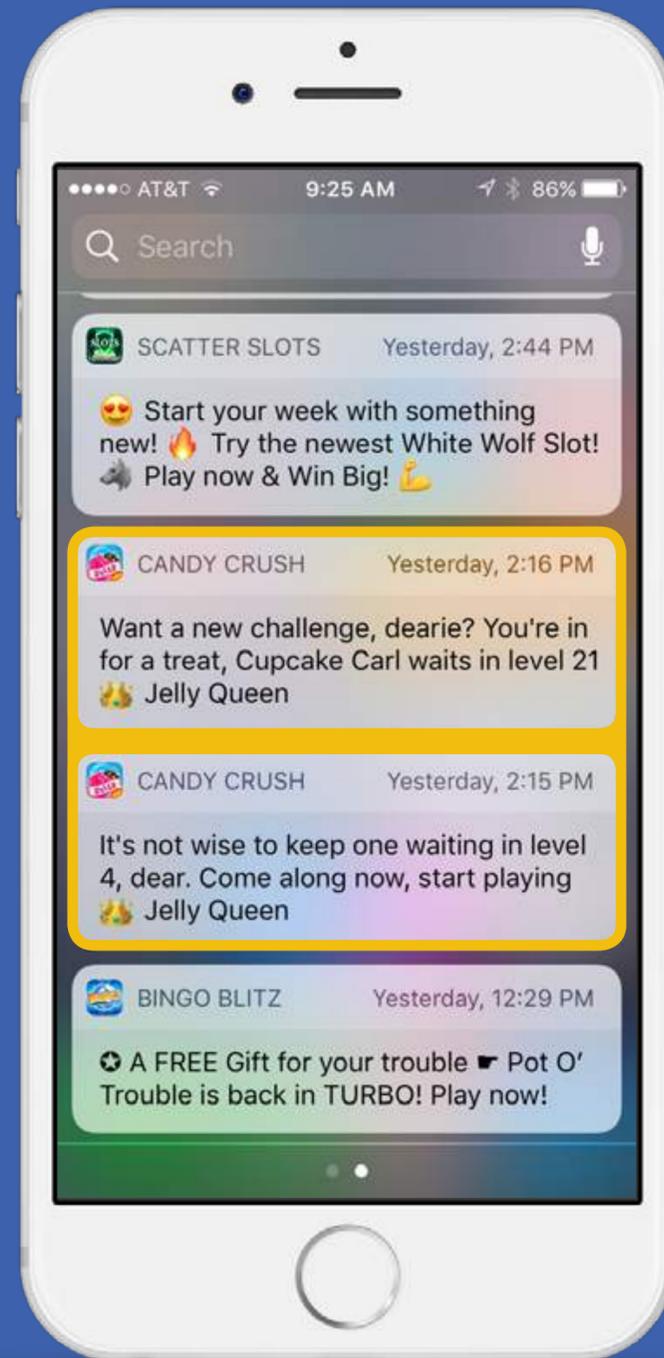


Fig. 14: Candy Crush Jelly Saga references current and future levels in its messaging.

The strategy of “gamification” can be applied across industries to accelerate business growth, but it’s interesting that few mobile games actually reference game progress in their push notifications.

Tapping into players’ competitive natures is a more common tactic among puzzle games, such as *Farm Heroes Saga* (Fig. 13) and *Candy Crush Jelly Saga* (Fig. 14). Unlike RPGs with sprawling storylines or casino games that never end as long as you keep spending virtual coins, puzzle games typically involve brief levels with clearly defined objectives.

All brands can personalize their mobile messaging by referring to a user’s current status and what rewards await them in the future. Motivating consumers to achieve a specific milestone gives a push notification an additional psychological push to keep going.



**TIP**

***Gamify the user lifecycle.***

*Determine what the equivalent of completing a level is for your business, whether it’s reaching the next tier in a loyalty program or writing a product review. Encourage customers to achieve these milestones by sending motivational messages and offering exclusive incentives.*

# Missed Opportunities

After our two-week study of analyzing the messages received by the top 100 grossing freemium games, we gained valuable insight into the content and timing of over 1,800 push notifications.

However, it is important to note the limitations of mobile gaming today. Here are two opportunities that mobile-first businesses can't afford to miss.



**Email engagement**

While the majority of games requested to send push messages, none of them asked for an email address. Pushes are essential to engagement, but they are restricted to the display limit of mobile devices.

Coordinating pushes with promotional emails is the next step to implementing true multi-channel marketing. Publishers can keep their games top of mind by emailing users regularly with information about upcoming sales, new levels and the current leaderboard.



**Mobile “cart” recovery**

Much like consumers of any online retailer, mobile gamers occasionally consider making an in-app purchase, only to cancel the transaction. By not making a strategic effort to recover these abandoned shopping carts, so to speak, publishers are leaving money on the table.

With the right growth marketing technology, mobile-first businesses can deploy cart abandonment campaigns to lead more customers to complete the checkout process.

## Summary

Our 2017 User Engagement Top 100 Report focuses on how the leading mobile games use push notifications to communicate with their users, but the gaming industry isn't the only one that can greatly benefit from this messaging channel.

With better insight into how and when mobile-first businesses use push notifications, all B2C companies can develop more effective and engaging multi-channel marketing campaigns.



# About Iterable

We appreciate you reading this User Engagement Top 100 Report. You can expect more reports like this to be published on a quarterly basis, covering a variety of industries and marketing channels. If you have any questions or feedback, we'd love to hear from you. You can email us anytime at: [hello@iterable.com](mailto:hello@iterable.com).

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# Appendix

Full list of the top 100 mobile games (and their respective publishers) analyzed in this report:

- |   |  |   |   |
|---|--|---|---|
|  1. <i>Game of War: Fire Age</i> (Machine Zone)                      |  20. <i>Slots House of Fun</i> (Pacific-Interactive)       |  47. <i>Zynga Poker</i> (Zynga)                        |  74. <i>Hit it Rich! Casino Slots</i> (Zynga)                        |
|  2. <i>Mobile Strike</i> (Machine Zone)                              |  21. <i>Gardenscapes: New Acres</i> (Playrix Games)        |  48. <i>Caesars Slots</i> (Playtika)                   |  75. <i>Dawn of Titans</i> (NaturalMotion)                           |
|  3. <i>Candy Crush Saga</i> (King)                                   |  22. <i>Lords Mobile</i> (IGG)                             |  49. <i>Slots: HUUUGE Casino</i> (HUUUGE Games)        |  76. <i>Solitaire TriPeaks</i> (Game Show Network)                   |
|  4. <i>Clash Royale</i> (Supercell)                                  |  23. <i>Episode</i> (Episode Interactive)                  |  50. <i>Design Home</i> (Crowdstar)                    |  77. <i>The Walking Dead: Road to Survival</i> (Scopely)             |
|  5. <i>Pokemon Go</i> (Niantic)                                      |  24. <i>World Series of Poker</i> (Playtika)               |  51. <i>Farm Heroes Saga</i> (King)                    |  78. <i>POP! Slots</i> (PlayStudios)                                 |
|  6. <i>Clash of Clans</i> (Supercell)                                |  25. <i>ROBLOX</i> (Roblox)                                |  52. <i>War and Order</i> (Camel Games)                |  79. <i>Kill Shot Bravo</i> (Hothead Games)                          |
|  7. <i>Candy Crush Soda Saga</i> (King)                              |  26. <i>Choices: Stories You Play</i> (Pixelberry Studios) |  53. <i>MyKONAMI Slots</i> (PlayStudios)               |  80. <i>Hearthstone: Heroes of Warcraft</i> (Blizzard Entertainment) |
|  8. <i>MARVEL Contest of Champions</i> (Kabam)                      |  27. <i>Panda Pop</i> (Jam City)                           |  54. <i>Boom Beach</i> (Supercell)                     |  81. <i>Monster Legends</i> (Social Point)                           |
|  9. <i>Yu-Gi-Oh! Duel Links</i> (KONAMI)                           |  28. <i>Bubble Witch 3 Saga</i> (King)                     |  55. <i>The Sims FreePlay</i> (Electronic Arts)        |  82. <i>Infinity Slots</i> (Murka Entertainment)                     |
|  10. <i>8 Ball Pool</i> (Miniclip)                                 |  29. <i>NBA LIVE Mobile Basketball</i> (Electronic Arts)   |  56. <i>Scatter Slots</i> (Murka Entertainment)        |  83. <i>Last Empire: War Z</i> (Long Tech Network)                   |
|  11. <i>Toy Blast</i> (Peak Games)                                 |  30. <i>Jackpot Party</i> (Phantom EFX)                    |  57. <i>Dragon Ball Z Dokkan Battle</i> (BANDAI NAMCO) |  84. <i>Genies &amp; Gems</i> (Jam City)                             |
|  12. <i>Star Wars: Galaxy of Heroes</i> (Electronic Arts)          |  31. <i>Legacy of Discord: Furious Wings</i> (YOUZU)       |  58. <i>Township</i> (Playrix Games)                   |  85. <i>The Walking Dead: No Man's Land</i> (Next Games)             |
|  13. <i>Slotomania</i> (Playtika)                                  |  32. <i>Clash of Kings</i> (ELEX Wireless)                 |  59. <i>Fishdom</i> (Playrix Games)                    |  86. <i>Covet Fashion</i> (Crowdstar)                                |
|  14. <i>Summoners War</i> (Com2uS)                                 |  33. <i>War Dragons</i> (Pocket Gems)                      |  60. <i>Kingdom Hearts Unchained</i> (SQUARE ENIX)     |  87. <i>Disney Emoji Blitz</i> (Disney Mobile)                       |
|  15. <i>Fire Emblem Heroes</i> (Nintendo)                          |  34. <i>Cookie Jam</i> (Jam City)                         |  61. <i>Wizard of Oz: Magic Match</i> (Zynga)         |  88. <i>Pixel Gun 3D</i> (Alex Krasnov)                             |
|  16. <i>Big Fish Casino</i> (Big Fish Games)                       |  35. <i>CSR Racing 2</i> (NaturalMotion)                 |  62. <i>SimCity BuildIt</i> (Electronic Arts)        |  89. <i>Two Dots</i> (Playdots)                                    |
|  17. <i>DoubleDown Slots &amp; Casino</i> (DoubleDown Interactive) |  36. <i>King of Avalon: Dragon Warfare</i> (FunPlus)     |  63. <i>Bingo Blitz</i> (Playtika)                   |  90. <i>Legendary: Game of Heroes</i> (N3TWORK)                    |
|  18. <i>Heart of Vegas Slots</i> (Product Madness)                 |  37. <i>Candy Crush Jelly Saga</i> (King)                |  64. <i>DoubleU Casino</i> (DoubleUGames)            |  91. <i>Bingo Bash: Wheel of Fortune</i> (BitRhymes)               |
|  19. <i>MADDEN NFL Mobile</i> (Electronic Arts)                    |  38. <i>Angry Birds 2</i> (Rovio Entertainment)          |  65. <i>Evony: The King's Return</i> (TOP GAMES)     |  92. <i>Final Fantasy Brave Exvius</i> (SQUARE ENIX)               |
|   |  39. <i>Angry Birds Blast</i> (Rovio Entertainment)      |  66. <i>Cooking Fever</i> (Nordcurrent)              |  93. <i>Injustice: Gods Among Us</i> (Warner Bros.)                |
|   |  40. <i>Hay Day</i> (Supercell)                          |  67. <i>Golf Clash</i> (Playdemic)                   |  94. <i>Dragon City Mobile</i> (Social Point)                      |
|   |  41. <i>YAHTZEE With Buddies</i> (Scopely)               |  68. <i>Willy Wonka Slots</i> (Zynga)                |  95. <i>WWE SuperCard</i> (2K)                                     |
|   |  42. <i>Rollercoaster Tycoon</i> (Atari)                 |  69. <i>Pet Rescue Saga</i> (King)                   |  96. <i>Wheel of Fortune Free Play</i> (Scopely)                   |
|   |  43. <i>Wizard of Oz: Vegas Casino Slots</i> (Zynga)     |  70. <i>Kim Kardashian: Hollywood</i> (Glu Games)    |  97. <i>Invasion: Modern Empire</i> (Tap4Fun)                      |
|   |  44. <i>myVEGAS Slots</i> (PlayStudios)                  |  71. <i>WWE Champions</i> (Scopely)                  |  98. <i>Angry Birds POP!</i> (Rovio Entertainment)                 |
|   |  45. <i>Gummy Drop!</i> (Big Fish Games)                 |  72. <i>Word Cookies!</i> (BitMango)                 |  99. <i>DC Legends</i> (Warner Bros.)                              |
|   |  46. <i>Vikings: War of Clans</i> (Plarium)              |  73. <i>Gold Fish Free Slots</i> (Phantom EFX)       |  100. <i>Fairway Solitaire</i> (Big Fish Games)                    |