Pushed Beyond Breaking: US newsrooms use mobile alerts to define their brand

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with Maxwell Foxman

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1. Acknowledgments

I would like to begin by thanking the Guardian US Mobile Innovation Lab for inviting us to partner on this project, particularly Sasha Koren, Sarah Schmalbach, and Madeline Welsh, all of whom have been an absolute pleasure to collaborate with. Having witnessed their tireless efforts at close range, it is hugely gratifying to see their work being recognized and embraced across the wider journalism community.

Thanks to all of my colleagues at the Tow Center, past and present, including Claire Wardle and Andrea Wenzel, both of whom were instrumental in the initial design of this project. Thanks, as always, to Abigail Hartstone for her meticulous copyediting and to Nausicaa Renner for her great work getting our research out into the world.

Special thanks to Maxwell Foxman, whose diligence and commitment made him a dream research partner.

Finally, I would like to place on record my thanks to the people interviewed for this project, all of whom were incredibly thoughtful and generous with their time. I hope this report does justice to all of the great work that is being done. I also hope it acts as a useful foundation for ongoing conversations about mobile alerts, and provides support and suggestions for best practices going forward.
2. Executive Summary

The aim of this research is to provide a comprehensive overview of how U.S. news outlets are using mobile push alerts to reach their audiences. Its objectives are to better understand how and why news outlets are using mobile push alerts, the decision-making process and workflows behind their use, how metrics inform strategy, and the major challenges presented by push alerts and how outlets have tackled them. The study intends to provide a detailed understanding of the use of mobile push alerts by news outlets of all sizes and backgrounds.

This research took part in two phases. The first involved a quantitative content analysis examining when and how news outlets send push alerts. For this part of the research we analyzed 2,578 push alerts—2,085 from thirty-one iOS apps and 492 from fourteen Apple News channels. These alerts were collected over the three-week period between June 19 and July 9, 2017 using an iPhone 6 running iOS 10. They were coded manually using a coding scheme devised to address our research questions. The second part of the research involved twenty-three, semi-structured interviews with audience managers, mobile editors, and product managers from a range of U.S. news outlets. These interviews focused on strategy and workflows, addressing issues such as how and why different outlets decide what to push, how and why they approach Apple News differently, their objectives for push alerts, how metrics are used to inform strategy, and major challenges that push alerts present. This report combines the findings from both phases of the research to provide a detailed overview of how U.S. newsrooms are approaching mobile push alerts.

Key Findings

Key findings from the content study:

- The average number of alerts received was 3.2 per outlet, per day. While most news outlet are pushing mobile alerts daily, some are doing so very aggressively. This is particularly true of outlets that provide multiple alert channels, two of which averaged around eleven alerts per day. Seven of the outlets in our study sent ten or more alerts in a single day.
- Alerts are no longer restricted to breaking news events. Over two-fifths of alerts sent from outlets’ iOS apps were not about breaking news (forty-three percent). Ten publishers sent more non-breaking news alerts than breaking news ones.
News outlets have shifted toward alerts that provide detail and context at the lock screen level. Over half of the alerts in our sample were coded as providing additional context (fifty-five percent), as opposed to being headlines, teasers, or round-ups.

Just twelve out of thirty-one outlets used rich media in their alerts (images, videos, animated GIFs). Two outlets attached rich media to all of their alerts. Overall, 573 rich media alerts were received: 408 contained images, 111 contained videos, and fifty-four contained animated GIFs. Although images were overwhelming favored, *USA Today* and the *Milwaukee Journal Sentinel* made extensive use of video.

Just three percent of alerts contained a direct call-to-action. By far the most common was “watch/tune-in.” This finding is in keeping with the overall trend of informing directly from the lock screen.

The vast majority of outlets approach Apple News push alerts very differently:

- Most pushed fewer alerts via Apple News than through their own apps
- Breaking news accounted for just twenty-six percent of Apple News alerts
- Teasers/clickbait are far more common, accounting for thirty-one percent of all alerts received via Apple News

Key findings from the interviews:

- Push alerts have emerged as a vital way of building and maintaining brand loyalty. Breaking news alerts, once the centerpiece of many news outlets’ alert strategies, are now almost secondary as many outlets become aware they must find other ways to stand out on cluttered lock screens. Over the last year or so, many outlets have felt emboldened to push more nice-to-know alerts, in addition to need-to-know ones.
- Regional outlets are grappling with additional considerations, such as how much national/global news their audiences expect them to push. Across the regional outlets in our study, eighty-four percent of alerts had a regional slant.
- For many people working with push alerts, the stated goal was to ensure their audiences are sufficiently informed directly from the lock screen. This goal often supersedes the desire to drive audiences into their apps—even though this is one of the foremost metrics through which “success” is quantified.
- Despite the dominant discourse around informing from the lock screen, most people conceded that driving traffic into their apps still has to be their end goal—whether they like it or not. This is at least partially because open rates are among the most widely used and understood metrics.
- Segmenting/personalization is highly valued by outlets that can do it, as it provides a valuable opportunity to surface content that may not necessarily be deemed appropriate for their main alert channel (typically breaking news). Audiences that opt in to niche alert
channels are seen as having provided a clear signal that they want extra alerts, offering news outlets license to be more aggressive. However, levels of segmentation differ greatly from one outlet to the next, and many people whose outlets’ apps do not provide segmenting want their product teams to implement it.

- While speed does remain important for some, a number of people argued that it is no longer as critical as it once was. Practitioners said that the focus on speed is rooted in outmoded notions of inter-organizational rivalry and does not necessarily apply to push alerts because audiences do not carry and compare as many news apps as journalists. From this perspective, journalists could do better at thinking like their audiences and recognizing the differences between themselves and the people that consume their work. This, it was argued, will help them achieve a more user-based approach to their alert strategies.

- Despite impressive traffic and valuable opportunities for brand exposure, many outlets are wary of Apple News and employ very different push strategies when using it. Some are nervous about conditioning audiences to consume their content via a third-party platform where they do not control the experience, user data, etc.

- Since Apple News is seen to provide more of a general interest audience, many outlets avoid pushing content that is most core to their brand and audience to the platform, keeping it exclusive to their consumer apps. This difference in audience has also seen Apple News emerge as a testing ground for different styles of push alert.

Challenges around tools and metrics:

- For many, the tools currently used for push alerts don’t feel up to scratch. In some cases, this is because they have been bundled together with other outputs focused on breaking news (e.g., push alerts synchronized with social media posts and updates to the website banner), in disservice to the push alert. This adds further fuel to the argument that the push alert is best treated as a distinct piece of content in terms of tools and workflow.

- Whether they are gathered in-house or via third parties, metrics/analytics for push alerts as they currently exist were said to be extremely lacking. Regardless of which metrics they prioritize (or combinations thereof), practitioners generally reported that their analytics paint a very incomplete picture, making it difficult for them to grasp where they are doing well and where they could improve.

- Metrics don’t/can’t tell practitioners one of the main things they want to know: whether their alerts are useful/valuable. Many people acknowledged the need for qualitative research into this. Some are in the fortunate position of having in-house research teams to help answer this question; others are not and will be left in the dark.
• The growing consensus about informing directly from the lock screen highlights one of publishers’ biggest gripes about metrics: that they currently have no way of telling if alerts have been seen. Consequently, many reluctantly find themselves focusing on open rates, despite their drawbacks. This is also beginning to impact how outlets prioritize metrics, with some effectively treating expansions (expanding alerts via 3D Touch or its equivalent) as “the new open.”

• The device-centric approach to overall analytics is flawed, leading some to hack together alternatives (e.g., weighted open rates that attempt to discount dormant devices). Some considered user-based analytics the “holy grail.” Despite its cost and complexity, it’s a goal some organizations are actively working toward.

Newsroom challenges:

• Many practitioners feel cultural change is required in the newsroom to achieve a shared vision that embodies the nuance of push alerts and does not place disproportionate focus on base metrics such as speed or open rates. At present, some people are occasionally placed under undue pressure to win the race to alert first or replicate high open rates achieved with previous alerts.

• There is a desire to see push alerts become more central to newsroom culture. Practitioners involved in push alerts would like to see colleagues get involved in the process, by suggesting language, etc. This is an area where they recognized they could and should do more to integrate colleagues into the process, and make them more aware of push strategies and the capabilities already available.

• Integrating push alerts can necessitate that existing workflows adapt or new ones are developed—something that can be met with resistance in newsrooms. Persuading management of the need for change often comes down to metrics, which are notoriously limited and do not necessarily gauge the value that push alerts bring to audiences.

• Segmenting may create as many new challenges as it alleviates old ones. Practitioners have to weigh the correct balance between active and passive personalization. For audiences to receive alerts about everything that an outlet publishes related to a specific topic, a considerable amount of work will be required in the future to ensure alert language is crafted for, and attached to, every piece of content and/or systems must be developed that can automate this process while retaining the voice of the organization.

Audience challenges:

• There may be a need to educate audiences about the possibilities of push alerts (expanding alerts, viewing video inside alerts, etc.), otherwise at least part of the work news outlets are doing will remain unrealized.
• Audiences are not monolithic; a change in push strategy that is welcomed in one location may not necessarily play well in others. Evidence of culturally/nationally specific idiosyncrasies further strengthens the case for more sophisticated audience segmenting.

3. Introduction

Interviews for this project took place around the time Apple was celebrating the tenth anniversary of the iPhone. During one conversation, a mobile editor paused in mid-sentence, laughed, and said, “You know, alerts aren’t even that new. They’re just kind of having a resurgence now.”

She was right, of course. On both counts.

Although Apple announced the Apple Push Notifications Service (APNs) at its annual Worldwide Developers Conference in 2008, the technology was not made available to third-party apps until the launch of iOS 3 (then known as iPhone OS 3.0) in June 2009. This was the third major release of the company’s mobile operating system.

At the time, push alerts were seen as a vital way of enticing users back to apps which, when not active, were effectively dead. A game changer for publishers, it’s a pertinent reminder of the speed at which smartphone technology evolves that this development was largely overshadowed by the introduction of another much-desired, unrelated, and long overdue feature: copy and paste.

The mobile landscape has shifted exponentially in the intervening years. Google and Facebook have gained what many see as a suffocating stranglehold on the news ecosystem, controlling how news is discovered and distributed, and swallowing up the vast majority of mobile advertising revenue in the process.

Intimately tied to this shift is the “resurgence” of alerts the mobile editor described above. Many news outlets have come to view push alerts—with their unique ability to directly reach an audience, to divert them away from third-party platforms and back toward their own consumer apps, and to build brand loyalty and develop news habits—as one of their most powerful weapons in the fight against the Big Two, Google and Facebook. One interviewee said they see push alerts as “a way to be increasingly relevant to our audience.” Another added, they are “a unique opportunity afforded by mobile to get your content out in front of people, to not count on them coming to you or going to a social platform. Instead, you’re actively surfacing yourself for them.”
The resurgence in push alerts, buoyed by ongoing advancements in both iOS (now up to version 11) and Google’s Android operating system, has opened up a host of exciting opportunities for news organizations. As is inevitable, it has also created numerous new challenges.

The speed of change is, at times, breathtaking. In the relatively short period between interviewing people for this project and writing the report, multiple outlets revamped their apps—adding rich media to their alerts and introducing a swathe of new customization options—rendering their alerts and strategies almost unrecognizable from how they’d been just weeks earlier.

The Guardian Mobile Innovation Lab has dedicated a considerable amount of its efforts to push alerts, and has been recognized both by people interviewed for this project and across the wider journalism community for the contribution it has made in this area. It was during a closed session hosted at The Guardian U.S. headquarters, attended by a number of product managers, mobile editors, audience managers, developers, and other folks whose daily work involves push alerts, that we first got a true sense of the strength of feeling around this technology. The gamut ran from excitement to frustration to outright despondency.

The bulk of this report is built around themes that recurred during our interviews. However, efforts were also made to include other insightful contributions that may shine a light on some of the other, possibly more niche issues that newsrooms have encountered. This will hopefully help interested parties get a broad understanding of some of the challenges their peers are trying to tackle, and enable them to prepare accordingly.

This report begins with the findings of our content analysis, presenting an overview of how different outlets approach push on their consumer apps and Apple News. The rest of the report is broadly structured around the process of publishing push alerts. To begin, we present an overview of the processes through which news outlets decide what to push—or how they decide what is worthy of a push alert. This is followed by a discussion of news outlets’ key objectives for their push alerts, and how they conceptualize success. We then cover the question of when, why, and how outlets are (or are not) using rich media in their push alerts. This is followed by a separate but intimately linked overview of how different outlets are trying to use metrics to inform their push strategies. To conclude, we present an extended discussion of some of the main challenges facing newsrooms in their efforts to implement successful push alert strategies.
4. Methodology

The project set out to address six research questions:

1. How frequently do news outlets send push alerts?
   - What proportion is about breaking news?
   - What proportion are headlines, and what other styles are used?

2. What are news outlets’ objectives for their push alerts and what do they consider a success?

3. How do news outlets decide which stories/topics are worthy of a push alert?
   - What additional considerations do regional news outlets have around national/global stories?

4. How are news outlets handling rich media (images, video, GIFs) and emojis in their push alerts?

5. How do news outlets use metrics to inform their push strategies?

6. What do journalists consider the major challenges when implementing their push strategies, and what steps have they taken to overcome the challenges faced?

These questions were addressed by combining two research methods: quantitative content analysis and semi-structured interviews.

Content Analysis

Alerts analyzed within our content analysis were collected from thirty-one iOS apps, selected to cover a broad range of news outlets (global and national publishers, broadcasters, digital-natives, news agencies, specialist news, etc.). Where apps offered multiple alert channels (e.g., “sports,” “entertainment,” etc.), all were switched on.

Alerts were collected using an iPhone 6 running iOS 10 over a three-week period between Monday, June 19, 2017 and Sunday, July 9, 2017 (inclusive). During this period, a total of 2,577 alerts were collected—2,085 via iOS apps and 492 via Apple News.

The following outlets’ iOS apps were included in the study:

- ABC News
• AOL
• AP News
• BBC News
• BuzzFeed
• BuzzFeed News
• Bloomberg
• Business Insider
• CBS News
• Chicago Tribune
• CNN
• CNN MoneyStream
• Dallas News
• Fox News
• The Guardian
• Houston Chronicle
• HuffPost
• Los Angeles Times
• Mic
• Milwaukee Journal Sentinel
• The New York Times
• NBC News
• NPR News
• New York Daily News
• Philly.com
• Quartz
• Reuters
• The Seattle Times
• USA Today
• The Wall Street Journal
• The Washington Post

Where available, we also collected alerts from publishers’ U.S. Apple News channels. Those whose Apple News alerts were collected for this study were:

• Bloomberg
• BuzzFeed News
• CBS News
• Chicago Tribune
• CNBC
• CNN
• Fox News
• HuffPost
• *Los Angeles Times*
• *The New York Times*
• *USA Today*
• Vox
• *The Wall Street Journal*
• *The Washington Post*

Each alert was manually coded for elements such as:

• The presence of rich media (images, videos, animated GIFs)
• The presence of emojis
• The number of engagement options attached to the alert

Additionally, alerts were also coded for subjective aspects such as:

• Whether or not the alert was deemed to be about breaking news
• The style of the alert (Headline, Additional context, Teaser, Round-up, Other)
• Whether or not alerts by regional outlets related to regional issues

All coding was conducted by Maxwell Foxman, a Ph.D. candidate at Columbia Journalism School. A sample of coding was assessed by Pete Brown to test for intercoder reliability. However, as with all research of this nature, we must still acknowledge that mistakes or inconsistencies resulting from human error are possible.

**Interviews**

The quantitative content analysis was supplemented by twenty-three, semi-structured interviews with audience managers, mobile editors, and product managers. These interviews were designed to provide insight into the decision-making processes behind publishers’ use of push alerts, as well as issues pertaining to workflows, staffing, training, approaches to analytics, and other major challenges. All interviews were entirely confidential to encourage openness. Consequently, interviewees and their outlets remain anonymous throughout this report.

Interviewees were drawn from organizations with diverse backgrounds, including global and regional publishers (some subscription-based outlets and ones operating membership schemes), digital natives, news agencies, and TV broadcasters, with audiences ranging from the tens of
millions to the tens of thousands. Pete Brown conducted interviews between May and August of 2017. Transcripts were coded and subjected to thematic analysis using the data analysis software NVivo.

5. How News Outlets Use Push Alerts

Our research highlighted the varying frequencies with which different news outlets send push alerts. Across our twenty-one-day sampling period, a total of 2,085 alerts were received from the thirty-one iOS apps in our study. This equates to a daily average of 3.2 alerts per app, per day.

**Total Push Alerts Received from iOS Apps, June 19–July 9, 2017 (n=2,085)**

In terms of sheer volume, the two CNN apps—CNN MoneyStream (234 alerts) and CNN (229 alerts)—stood out from the crowd, each pushing over one hundred more alerts than the next highest outlet, *USA Today* (128 alerts), during the studied time period. It should be noted, however, that because we enabled every possible segmenting channel in each app these figures reflect the maximum number of alerts sent. In the case of the CNN apps, MoneyStream has a number of alert channels that can be enabled or disabled (CNNMoney Latest, Breaking News,
#Trending, etc.), while the main CNN app allows users to control the volume of alerts they receive (e.g., 7+—Can’t miss a thing: All news alerts).

### Alert Frequency Settings in CNN’s iOS App

<table>
<thead>
<tr>
<th>News Alerts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alert Frequency</strong></td>
</tr>
<tr>
<td>How do you want your news alerts delivered every day?</td>
</tr>
<tr>
<td>![0-2] Just the big stuff</td>
</tr>
<tr>
<td>![3-6] The day’s top news</td>
</tr>
<tr>
<td>![7+] Can’t miss a thing</td>
</tr>
</tbody>
</table>

### Upgrade to CNN FYI

CNN FYI – An occasional update on new features and programs from CNN.

### Disable Alerts

Turn off all CNN alerts and notifications

As the table below illustrates, all but three outlets averaged at least one alert per day. However, the daily flow of alerts fluctuated with the news cycle, prompting twenty outlets to send four or more alerts in a day on at least one occasion. At the higher end of the scale, there were seven apps from which ten or more alerts were sent in a single day: AP News, BuzzFeed News, CNN, CNN MoneyStream, Fox News, Mic, and USA Today. Notably, unlike the other outlets in this group, Fox News’s app does not offer multiple alert channels—users can only toggle “Breaking
News Alert” on or off. Therefore, all users opted-in to Fox News alerts would have received all of these alerts.

The high number of alerts some outlets pushed out is not surprising, as more than a few interviewees noted that their companies have become more aggressive in this regard, sensing a higher level of tolerance among audiences now accustomed to receiving alerts from various apps throughout the day. As one mobile editor put it:

We’re no longer scared of inundating people with alerts because we think we’re going to annoy them. I think we’re moving away from that. People are using so many other apps, whether it’s Snapchat or Instagram or WhatsApp, for communicating, everybody always has a million notifications on their phone. As news organizations, we tend to put ourselves kind of on this pedestal and think that our content and what we do is really precious, [but] that creates a barrier between the reader and the journalist, or the news organization.

### Breakdown of Alerts by Publisher

<table>
<thead>
<tr>
<th>Publisher</th>
<th>Total alerts received</th>
<th>Weekday total</th>
<th>Weekend total</th>
<th>Average per day</th>
<th>Weekday average per day</th>
<th>Weekend average per day</th>
<th>Most alerts received in a single day</th>
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<tbody>
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<td>CNN MoneyStream (n=234)</td>
<td>234</td>
<td>212</td>
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<td>14.1</td>
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<td>BuzzFeed News (n=121)</td>
<td>121</td>
<td>99</td>
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<td>5.8</td>
<td>6.6</td>
<td>3.7</td>
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<td>The New York Times (n=110)</td>
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<td>21</td>
<td>5.2</td>
<td>5.9</td>
<td>3.5</td>
<td>9</td>
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<td>Source</td>
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<td>Mic (n=98)</td>
<td>Quartz (n=91)</td>
<td>BuzzFeed (n=90)</td>
<td>Fox News (n=86)</td>
<td>HuffPost (n=78)</td>
<td>Chicago Tribune (n=68)</td>
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<td>4.7</td>
<td>4.3</td>
<td>4.3</td>
<td>4.1</td>
<td>3.7</td>
<td>3.2</td>
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<tr>
<td>Uninstall Percentage</td>
<td>5.9</td>
<td>6.3</td>
<td>4.9</td>
<td>4.9</td>
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<td>Total Device Uninstall Percentage</td>
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<td>1.0</td>
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<td>Additional Device Uninstall Percentage</td>
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<td>The Washington Post (n=48)</td>
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<td>1.9</td>
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<td>The Guardian (n=37)</td>
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<td>1.8</td>
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<td>BBC News (n=36)</td>
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<td>1.8</td>
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<td>3</td>
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<tr>
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</tr>
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<td>3</td>
<td>1.2</td>
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<td>1.2</td>
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<td>Median Alerts</td>
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<td>-----</td>
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<tr>
<td>NPR News (n=21)</td>
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<td>3</td>
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<tr>
<td>Reuters (n=13)</td>
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<td>1</td>
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</tr>
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</table>

**Average Number of Alerts Received Via iOS Apps Per Day, June 19–July 9, 2017**
What proportion of push alerts are about breaking news?

Breaking news is intrinsically linked to push alerts. The lay assumption may be that news outlets only send out push alerts when a major breaking news event occurs. However, while breaking news remains an important part of most outlets’ alert strategies, a number of interviewees stressed that that alone is not enough to make them stand out from their competitors. Consequently, many are pushing more non-breaking news such as enterprise reporting, in-depth features, and analysis—sending more “nice-to-know” alerts in addition to “need-to-know” ones, as one mobile editor described it (see section titled “How News Outlets Decide What to Push”).

iOS Apps: Breaking versus Non-Breaking News, June 19–July 9, 2017 (n=2,085)
On their iOS apps at least, publishers’ approach to breaking news largely reflected this. Every app pushed breaking news alerts to some extent, and across the sample it accounted for over half of all alerts (fifty-seven percent). When big stories broke, it was not uncommon to receive a flurry of alerts in quick succession. The image below shows twenty similar alerts received over the course of fourteen minutes when news broke on June 26 that the Supreme Court would be reviewing President Trump’s revised travel ban. Similarly, the announcement that Otto Warmbier, the American student held in North Korea, had died generated eighteen iOS alerts (and an additional two via Apple News) over the course of twenty-five minutes.

**Similar Alerts about Trump’s Travel Ban Received Over the Course of Fourteen Minutes**

While our findings reflect an ongoing commitment to breaking news, the relatively slim margin by which these alerts outweighed non-breaking ones is indicative of how outlets are looking for alternative ways to engage their audiences via push. (To take one high-profile example, in the period since data were collected for this project, The Wall Street Journal has supplemented its breaking news alerts with eight additional channels.) Indeed, across our sample, over two-fifths of alerts received were not about breaking news events (forty-three percent). Notably, there were ten outlets for whom the majority of their alerts was not about breaking news.

**Breakdown of Breaking versus Non-Breaking News by Outlet**

<table>
<thead>
<tr>
<th>Publisher</th>
<th>Breaking</th>
<th>Non-breaking</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABC News (n=35)</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>AOL (n=60)</td>
<td>47%</td>
<td>53%</td>
</tr>
<tr>
<td>AP News (n=102)</td>
<td>95%</td>
<td>5%</td>
</tr>
<tr>
<td>News Source</td>
<td>Open Rate</td>
<td>Private Rate</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------</td>
<td>--------------</td>
</tr>
<tr>
<td>BBC News (n=36)</td>
<td>92%</td>
<td>8%</td>
</tr>
<tr>
<td>Bloomberg (n=33)</td>
<td>52%</td>
<td>48%</td>
</tr>
<tr>
<td>Business Insider (n=17)</td>
<td>94%</td>
<td>6%</td>
</tr>
<tr>
<td>BuzzFeed (n=90)</td>
<td>38%</td>
<td>62%</td>
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<tr>
<td>BuzzFeed News (n=121)</td>
<td>45%</td>
<td>55%</td>
</tr>
<tr>
<td>CBS News (n=39)</td>
<td>64%</td>
<td>36%</td>
</tr>
<tr>
<td>Chicago Tribune (n=68)</td>
<td>94%</td>
<td>6%</td>
</tr>
<tr>
<td>CNN (n=229)</td>
<td>64%</td>
<td>36%</td>
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<tr>
<td>CNN MoneyStream (n=234)</td>
<td>31%</td>
<td>69%</td>
</tr>
<tr>
<td>Dallas News (n=31)</td>
<td>35%</td>
<td>65%</td>
</tr>
<tr>
<td>Fox News (n=86)</td>
<td>92%</td>
<td>8%</td>
</tr>
<tr>
<td>The Guardian (n=37)</td>
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<td>59%</td>
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<td>Houston Chronicle (n=59)</td>
<td>92%</td>
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<td>HuffPost (n=78)</td>
<td>38%</td>
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<td>Los Angeles Times (n=39)</td>
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<tr>
<td>Mic (n=98)</td>
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<td>85%</td>
</tr>
<tr>
<td>Source</td>
<td>Open Rate</td>
<td>Unsubscribe Rate</td>
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<tr>
<td>---------------------------------------</td>
<td>-----------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Milwaukee Journal Sentinel (n=53)</td>
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</tr>
<tr>
<td>NBC News (n=27)</td>
<td>67%</td>
<td>33%</td>
</tr>
<tr>
<td>NPR News (n=21)</td>
<td>62%</td>
<td>38%</td>
</tr>
<tr>
<td>New York Daily News (n=26)</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>The New York Times (n=110)</td>
<td>42%</td>
<td>58%</td>
</tr>
<tr>
<td>Philly.com (n=2)</td>
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<td>0%</td>
</tr>
<tr>
<td>Quartz (n=91)</td>
<td>9%</td>
<td>91%</td>
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<td>Reuters (n=13)</td>
<td>69%</td>
<td>31%</td>
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<tr>
<td>The Seattle Times (n=25)</td>
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<td>36%</td>
</tr>
<tr>
<td>USA Today (n=128)</td>
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</tr>
<tr>
<td>The Washington Post (n=48)</td>
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</tr>
<tr>
<td>The Wall Street Journal (n=49)</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td>Total</td>
<td>57%</td>
<td>43%</td>
</tr>
</tbody>
</table>
How are news outlets using rich media in push alerts?

At the time of our data collection, rich notifications did not appear to be a major priority for many of the outlets under examination. Overall, twelve of the thirty-one iOS apps in our study sent at least one push alert containing an image, video, or animated GIF. Thus, the nineteen outlets that did not make use of rich media (two-thirds of our sample) were very much in the majority.
Rich Media in Push Alerts, June 19–July 9, 2017 (n=573)

Between the twelve apps that utilized this technology, 573 rich media alerts were sent: 408 contained images, 111 contained videos, and fifty-four contained animated GIFs (all posted by Quartz). Of particular note was the apparent reluctance to use video. Indeed, only Mic (one), the Milwaukee Journal Sentinel (twenty-four), and USA Today (eighty-six) pushed any alerts containing videos. In the case of USA Today, whose marketing materials champion its self-described “unique visual storytelling,” video appears to be particularly important. The other outlet to make frequent use of video, the Milwaukee Journal Sentinel, is also part of the Gannett-owned USA Today Network.
Examples of Images, Animated GIFs, and Videos in Expanded Push Alerts

A side-by-side comparison of the proportion of alerts containing rich media further highlights the different approaches newsrooms are taking. Two outlets, the Milwaukee Journal Sentinel and Mic (whose app was built around push alerts and seeks to maximize the opportunities offered at the lock screen level because, according to its splash video, “nobody likes opening apps”), attached rich media to every alert we received. Two others, NBC News (ninety-six percent) and USA Today (eighty-seven percent), were not far behind. Elsewhere, the proportion of alerts containing images or videos ranged from around one-tenth to two-thirds, suggesting that (in keeping with our interview findings) outlets that do use some rich media but have not adopted a policy of attaching media to every alert are selective about when and where they feel rich media adds value to their alerts (see section titled “Attitudes Toward Rich Media in Push Alerts”).
Proportion of Push Alerts Containing Rich Media, June 19–July 9, 2017

Rich media: image, video, animated GIF.
One of the Few *USA Today* Alerts without an Image or Video

What style of push alerts do news outlets prefer?

In the early days of push, the average news alerts typically consisted of little more than a headline designed to tempt the user into reading the attached story. However, the culture has shifted; headlines are now often described as outmoded and robotic, while teasers get dismissed as annoying clickbait. The consensus among our interviewees was that alert language should be conversational, personal, and crafted in such a way that users do not need to tap through to understand the story (see section titled “Objectives for Push Alerts and Notions of Success”).

So to what extent does this anecdotal shift away from headlines toward more informative alerts play out? In order to get a handle on the styles that different outlets apply, we categorized alerts into one of five groups:

- Headline
- Additional context (alerts that sought to provide more context about a story than just a headline)
- Teaser (alerts that deliberately withheld information, forcing the recipient to tap through, e.g., “Here’s who would be hurt and who would be helped by the Senate health care bill,” “This is why Democrats can’t quit Nancy Pelosi” “Vitamin D could be a sunburn remedy, but what does it mean for skin cancer?”)
- Round-up (multiple stories/headlines bundled into one alert)
- Other (alerts that did not fit any of the above criteria, e.g., Quartz’s haiku alerts)
Examples of Different Alert Styles

The overall trend in iOS alerts reflected the consensus articulated by interviewees: Headlines (twenty-five percent) and clickbait-style teasers (eleven percent) were very much in the minority compared to alerts providing additional context (fifty-five percent). Well over half of the outlets—nineteen out of thirty-one—pushed more alerts of this style than any other. For six of them—BBC News Worldwide, BuzzFeed, BuzzFeed News, CNN, NPR News, *The New York Times*, and *The Wall Street Journal*—alerts categorized as “additional context” accounted for at least eighty percent of all alerts.
For some outlets, however, headline-style alerts appear to be a preferred style, possibly due to a desire to drive traffic and/or get an alert out as quickly as possible. What’s more, when unexpected news first breaks, journalists often have access to little more than the bare bones of the story (e.g., “Travis Kalanick has resigned as Uber’s chief executive officer,” CBS News, June 21; “Trump says he has no tapes of Comey conversations,” *The Washington Post*, June 22).

That teasers accounted for eleven percent of alerts was a slight surprise to us, particularly as a number of interviewees made a point of deriding this style of alert. One product manager said her outlet will “really try to avoid having things be clickbait-y because really the point of an alert is to inform.” Another mobile editor said, “I don’t think we ever aspire to do things that are clickbait or that you really need to swipe to get value out of.” Of the two that used teasers more than any other style, Mic (forty-three percent) and CNN MoneyStream (forty-one percent), it should be noted that their objective is to coax the reader into expanding the alert. Meanwhile, “additional context” alerts look to direct traffic into the app.
## Breakdown of Alert Style by Outlet

<table>
<thead>
<tr>
<th>Publisher</th>
<th>Additional Context (n=1,152)</th>
<th>Headline (n=520)</th>
<th>Teaser (n=235)</th>
<th>Round-up (n=167)</th>
<th>Other (n=11)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABC News (n=35)</td>
<td>74%</td>
<td>23%</td>
<td>3%</td>
<td>0%</td>
<td>0%</td>
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<tr>
<td>AOL (n=60)</td>
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<td>45%</td>
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<tr>
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<tr>
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<td>18%</td>
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<td>CBS News (n=39)</td>
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<tr>
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<td>0%</td>
</tr>
<tr>
<td>CNN MoneyStream (n=234)</td>
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<td>12%</td>
<td>41%</td>
<td>6%</td>
<td>0%</td>
</tr>
<tr>
<td>Dallas News (n=31)</td>
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<td>3%</td>
<td>58%</td>
<td>0%</td>
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<tr>
<td>Source</td>
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<td>No In-App</td>
<td>No Open</td>
<td>No Click</td>
</tr>
<tr>
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<td>------</td>
<td>-------------</td>
<td>-----------</td>
<td>---------</td>
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</tr>
<tr>
<td>Fox News (n=86)</td>
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<td>80%</td>
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<td>3%</td>
<td>11%</td>
<td>0%</td>
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<tr>
<td>Houston Chronicle (n=59)</td>
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<td>0%</td>
<td>0%</td>
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<tr>
<td>HuffPost (n=78)</td>
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<td>3%</td>
<td>4%</td>
<td>36%</td>
<td>0%</td>
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<td>Los Angeles Times (n=39)</td>
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<td>10%</td>
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<td>Mic (n=98)</td>
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</tr>
<tr>
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<td>47%</td>
<td>51%</td>
<td>2%</td>
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<td>0%</td>
</tr>
<tr>
<td>NBC News (n=27)</td>
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<td>56%</td>
<td>4%</td>
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<td>NPR News (n=21)</td>
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<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
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<td>New York Daily News (n=26)</td>
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<td>0%</td>
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<td>0%</td>
</tr>
<tr>
<td>The New York Times (n=110)</td>
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<td>1%</td>
<td>7%</td>
<td>3%</td>
<td>0%</td>
</tr>
<tr>
<td>Philly.com (n=2)</td>
<td>50%</td>
<td>50%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Quartz (n=91)</td>
<td>9%</td>
<td>1%</td>
<td>1%</td>
<td>78%</td>
<td>11%</td>
</tr>
<tr>
<td>Reuters (n=13)</td>
<td>62%</td>
<td>38%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
## How frequently do push alerts contain a call to action?

Given the desire among many to make push alerts as informative as possible, we were interested to assess the proportion containing a call to action—an instruction for the recipient to perform an action after reading the alert. This, we found, was a relatively uncommon practice. Overall, just sixty of the 2,085 iOS alerts contained a call to action (three percent). By far the most common was “watch/tune in,” which occurred thirty times (e.g., “Watch it live: NASA announces discovery of exoplanets,” USA Today, June 19). Unsurprisingly, nineteen of these were received from TV broadcasters, such as CNN (ten), Fox News, and CBS News (four each). Outside of the TV broadcasters, USA Today also used “watch” as a call to action on five occasions, a finding that fits with its visual brand and frequent use of video in expanded push alerts.
Dallas News employed another noteworthy use of calls to action. Of the thirty-one alerts we received from Dallas News, ten contained the call to action “Tap or slide for details” in bold type, a move that may be designed to increase awareness among its audience that alerts can be expanded or used as a direct route into the app (see section titled “Challenges”).
The shift toward ‘conversational’ alerts

Publishers are giving considerable thought to alert language. As with the shift away from straight breaking news, this is an area where many practitioners point to a tangible change in culture and thinking over the last year or so.

In terms of how alerts are crafted, our interviews suggest that the dominant trend is to aim for a “conversational” style. This phrase recurred again and again across our interviews. It is somewhat difficult to define a conversational tone because it is (a) highly subjective and (b) likely to differ from one newsroom to the next, depending on the outlet’s target audience, subject niche, etc. However, the main style/tone against which conversational alerts were contrasted was headlines.

A number of interviewees noted that the reasons for a move away from headline-style language were numerous. The first is that headlines do not allow publishers to stand out and distinguish the character of their brands on lock screens increasingly crowded with alerts from an array of apps. One mobile editor pointed to a broader shift in culture across all kinds of alerts:

> I think the lock screen has become so much more essential for people to find what’s relevant and to find something to read, and I think with that, just based on the notifications that you get from other apps, whether that’s Seamless or Uber, the text is much more conversational and personal. I think news organizations need to go in that direction and extend the voice that they have in their stories so that the same voice and uniqueness is in their notifications.

This emphasis on using alerts to project the brand’s voice and character was recurrent. An audience manager cited this objective when explaining the limitations of headlines: “One thing that we’ve tried adamantly to move away from is just using the headline of the story because it doesn’t provide voice, often it doesn’t provide enough context, and it seems very robotic and soulless.” Another described her outlet’s previous focus on headlines as “pretty stodgy,” while a mobile editor said they consistently aim to add character by injecting a degree of humor into their alerts: “We try to be really conversational with all of our alerts . . . We don’t want it to be boring, or too almost traditional . . . We try to be kind of funny.”

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1 The original research design of our content analysis set out to code for “conversational” and “non-conversational” alerts. However, early pilot studies found this to be too subjective. Having been unable to achieve an acceptable level of inter-coder reliability, this aspect of the study was removed.
Another key reason for shifting away from headlines is that they do not allow publishers to achieve their oft-stated goal of informing directly from the lock screen. Instead, headlines can come across as more of a “tease,” as trying to force audiences to launch the app—a strategy many are increasingly reluctant to employ (see section on objectives and goals). One audience manager presented this as a needlessly risky approach:

I definitely have seen other publishers go a different [non-conversational] route where it is more like the headline or more like something that you need to swipe to get value out of. I definitely think we do that sometimes too, but I think that as a user I can get more annoyed by that and I don’t want to annoy our readers.

When explaining the rationale for a more conversational style, a number of participants stressed that this emphasis on conveying voice and character should not compromise their ability to capture the essence of the story. This is seen as an important balancing act across the industry. An audience manager from an outlet aimed primarily at younger audiences said, “We talk about it internally. It’s a friendly voice, but it’s also a no B.S. voice. You’re still getting the same news that you wanted. It’s smart, it’s accurate, but it can be friendly. We want to be both friendly and informative, so that’s what we hope our alerts do.

Another interviewee from an outlet with a much older, more conservative demographic made a similar point: “We want the tone of our push alerts to be authoritative but conversational . . . We try to bring the [outlet’s] authoritativeness and seriousness, but it’s almost like the reporter telling you what the story is about in a conversational way, and I do think that’s evolving.”

This move to conversational language appears to have played well with audiences. A number of participants said their internal data (limited as it admittedly is) suggested a correlation between conversational language and higher engagement. At the broadest end of the scale, these findings have occasionally been used to justify the shift away from headlines, said one interviewee:

When we first started sending out notifications, which was probably three or four years ago, we just had the headline. We sent it in the headline case, and we didn’t care about where it sent you, and our goal above all was to get it out fast . . . But the more we looked into the data, the more we found that’s not the way people engage with push notifications. It’s really not like a wire headline at all, it’s much more personal than that . . . People don’t like headlines, they don’t like a push that doesn’t go anywhere, so the result was going away from headlines and making it more sentence case—and we found more success with sentence case—and then we played around with notifications a little more and found that people like it to sound more like a sentence than the headline.
At a more granular level, a product manager described some focused A/B testing around specific language, wherein they experimented with different greetings in alerts promoting the availability of their daily iPad edition (“Hello” versus “Good morning” versus “Good day” versus no greeting). What they found was not only that “Good morning” outperformed the version without a greeting, it also far outperformed the alternative language.

Using a more conversational style can, however, have ramifications in terms of speed. In the time it takes multiple people to have a Slack exchange about how best to craft the language, some rival outlets will have already pushed their alert. Though where this issue was mentioned, it was usually framed as a worthwhile tradeoff. For example, one mobile editor said, “The AP or CNN are most of the time faster than us, especially the AP, but their brand is, ‘We want to be first.’ For us, we want to be the best, and often that means . . . paying more attention to writing something that feels a little more human, a little more conversational, a little more complete.” (See our discussion about the importance of speed in the section titled “Objectives for Push Alerts and Notions of Success.”)

Case Study: Alerts Pushed Via Apple News

Apple introduced push alerts to Apple News with the release of iOS 10 in October 2016. This added a new dimension to the push strategies of publishers with a presence on Apple News, presenting new questions and challenges.

Apple News carries many of the same pros and cons as other products developed by third parties, such as Facebook Instant Articles. Among the positives, it provides scale, the possibility of reaching new audiences, and, potentially, additional revenue. On the flip side, many publishers remain wary of relinquishing too much control (of distribution, monetization, audience, brand, etc.) to third parties. In some instances, it seems that the uncertainties and anxieties around publishing to third-party platforms seeps into news outlets’ approach to push alerts.

One mobile editor said of Apple News: “It’s a blessing and a curse. It’s a huge opportunity to reach a really big audience for a lot of others. It’s also a risk, and we’re just like everyone else: We’re trying to figure out how to handle that . . . We’re being pretty cautious with Apple News.”

Similarly, another editor from a subscription-based outlet said, “Our whole Apple News strategy is a little bit up in the air right now. I think it’s no mystery to say that a lot of publishers on Apple News, at least ones that are subscriber-based, have not seen much return on that investment.”
Across our interviews, it became evident that many outlets’ push strategies for Apple News are very different than those for their consumer apps. As one interviewee put it, “Apple News is a whole other animal.” (At some outlets, Apple News alerts are not even done in-house. In one instance, a regional mobile editor described how Apple News alerts for their outlet are crafted and pushed from a different outlet’s newsroom 2,000 miles away.) Some of these differences were clearly evidenced in our data.

When this research was conducted, twelve of the thirty-one outlets whose iOS apps we monitored also pushed alerts via Apple News channels. In addition to those twelve, we also included CNBC and Vox.

At the end of our study, a total of 492 alerts had been received via Apple News, an average of thirty-five per outlet. The daily average of 1.7 alerts per outlet per day is around half that pushed via iOS apps. However, it should be noted that Apple News does not accommodate any form of segmentation for individual publishers (breaking news, sports, etc.)—users are either all-in or all-out on any given outlet’s alerts.

The two biggest users of Apple News alerts were CNN (eighty-three alerts) and USA Today (fifty-nine alerts), the same two brands that topped the charts for iOS alerts. Interestingly, the outlet in third, The Wall Street Journal, sent more alerts via Apple News than via its iOS app (fifty-eight versus forty-nine). (This is unlikely to be the case now, due to the Journal’s aforementioned introduction of topic channels on its iOS app.) It must, however, be acknowledged that the content was invariably quite different across platforms. Not only does the Journal, like many others, employ a very different style on Apple News (discussed below), it also uses Apple News as much more of a general interest platform (e.g., “Did you ever suspect that your parents had a favorite child? You were probably right,” “Planning a beach trip? Maybe leave the tent at home”). A significant reason for this is that the majority of its more high-end, signature content is locked away behind a paywall.
Push Alerts Received Via iOS Apps versus Apple News, June 19–July 9, 2017

Aside from The Wall Street Journal, most outlets pushed considerably fewer alerts via Apple News than through their iOS apps. One notable exception was The Washington Post, whose approach to Apple News was almost identical to that for its iOS app. Over the course of our three-week study, forty-eight alerts were received via the Post’s iOS app and forty-six via its Apple News channel. Of these, forty-three were identical across platforms—meaning just five were unique to the iOS app and three were unique to Apple News.
The Washington Post Alerts Pushed Concurrently to Apple News and Its iOS App

Breaking news and Apple News

Breaking news is the one area where many outlets treat Apple News differently than their consumer apps. In short, most appear much less likely to push breaking stories via Apple News. Overall, twenty-six percent of Apple News alerts were categorized as breaking news, compared to fifty-seven percent on iOS.
As noted above, The Washington Post’s Apple News alerts were almost identical to those pushed via its iOS app. It follows, therefore, that the proportion of breaking news alerts received via the Post’s Apple News channel (fifty-nine percent) was almost identical to that of its iOS app (sixty percent). The only other outlet to exhibit similar treatment of breaking news across platforms was CBS News. While more alerts were received via CBS’s iOS app than its Apple News channel (thirty-nine versus twenty-eight, respectively), the proportion classified as breaking news was the same across platforms (sixty-four percent). Outside of these two outlets, the proportion of breaking news alerts sent via Apple News was invariably much lower—in the cases of HuffPost, The New York Times, and The Wall Street Journal, no Apple News alerts was classified as breaking news.
**Proportion of Breaking News Alerts Via Apple News and iOS, June 19–July 9, 2017**

![Bar chart showing the proportion of breaking news alerts via Apple News and iOS for different news outlets.](image)

**Style and Apple News**

While the overall proportion of alerts coded as “additional context” was the same on both iOS and Apple News (fifty-five percent), there were striking differences in terms of publishers’ willingness to push “teaser” alerts on Apple News. Overall, around one-third of the 492 alerts pushed via Apple News were categorized as teasers (thirty-one percent)—considerably more than the eleven percent pushed via iOS.

Zooming in on individual outlets, a number stand out in terms of their increased use of teasers on Apple News. This includes CNN, HuffPost, *The New York Times*, *USA Today*, and *The Wall Street Journal*, whose use of teasers jumped from four-to-nine percent of alerts on iOS to thirty-three-to-sixty-eight percent on Apple News. More generally, this difference in style appears to reflect a tendency to treat Apple News as something of a testing ground and/or a safe space...
where publishers can experiment (with style, less “on-brand” stories or language, emojis, etc.) without fear of upsetting their core audience (discussed below).

**Outlets That Pushed a Higher Proportion of Teaser Alerts on Apple News versus iOS, June 19–July 9, 2017**
Teaser Alerts Pushed to Apple News by The Wall Street Journal and The New York Times

Why is Apple News treated differently?

Rationales for news outlets’ contrasting approach to Apple News differ from one newsroom to the next. Some have deliberately defined a strategy to try and maximize the level of differentiation between the two. A mobile editor from a large, specialist news outlet said:

We don’t want our push alerts [from the consumer app] to overlap with our Apple News ones. We will maybe, on occasion, use the same text on an alert, but send it several hours apart or maybe a couple of days apart, if it’s a feature story. But we aren’t as aggressive on Apple News. We send on average of four alerts there per day.

This strategy of self-defined Apple News quotas was described elsewhere. A product manager from another outlet said, “We do Apple News pushes . . . but that’s a completely different strategy and we won’t send more than one Apple News push a day.”

As we have seen, another area where Apple News strategies differ is breaking news, with just twenty-six percent of the alerts we received via Apple News about breaking stories, compared to fifty-seven percent via publishers’ iOS apps. The rationale for this was varied. Some said they did not want their audiences to become accustomed to receiving breaking news via a third-party platform. Others said their Apple News audience did not engage with breaking news and, unlike with their consumer apps, they felt less obligation to continue pushing it.
One product manager noted: “We never really sent breaking news alerts [via Apple News] and we really still don’t . . . Things that we send to Apple News are much more like general interest-type things.” Interestingly too, more than one interviewee pointed to technical problems impacting their approach. For example, one mobile editor said, “We do sometimes put breaking news alerts [on Apple News], but we noticed a bit of a delay when content publishes to Apple News. So by the time the content actually appears in Apple News, we craft the alert and send it, we’re going to be several minutes behind our competitors and our consumer app, so we don’t often put breaking alerts there.”

In many cases, differences in strategy between iOS and Apple News are at least partly driven by the assumption that publishers are dealing with very different audiences in each space. This perception appears, at least partially, to derive from educated guesswork, due to the limited analytics Apple provides. One mobile manager said, “We assume that they’re very different audiences—and what we’ve seen in terms of how push alerts perform [on each platform] is very different.”

One striking aspect of discussions around Apple News was the frequency with which interviewees framed it as a general interest platform. Thus, a number of the outlets covered in this research are not just pushing different volumes of alerts to Apple News, or curtailing the level of breaking news, they are also pushing different types of alerts (e.g., around topics that might be considered less on-brand).

A mobile editor from a large global news outlet brought up a specific alert—the kind of which would not typically be associated with his outlet’s brand—and outlined why it was deemed appropriate for their “general interest” Apple News audience:

We thought that this would be a good one for Apple News, in part because it’s kind of a more general interest audience than the audience that has our app. That’s kind of a really easy entry point . . . It’s not serious news so it’s a nice gateway into [news brand] for people that have only a casual relationship with us. And it shows them that we do stuff like that.

This trend for pushing less on-brand content via Apple News came into particularly sharp focus during discussions with outlets that serve a niche audience. An editor from a specialist news outlet outlined how they push very different alerts to Apple News due to how audiences engage with them: “We’ve found that actually things like rankings or more value-add kind of push alerts do really well. So just like, ‘These are the highest paying jobs in America’—that was our best performing alert there. We really wouldn’t send that to our consumer app because it’s such a different audience.”
Elsewhere, an editor from an outlet with a strong focus on business and finance described how their Apple News audience doesn’t engage with subjects most closely related to their brand: “We just find engagement is different with that audience [on Apple News]. They don’t engage with breaking news and hard business news as much as our core app audience does, but they do engage with technology and business-of-life content.”

A mobile editor from the same outlet went into more detail, describing the variety of topics they push via Apple News:

We . . . know that the readership and the audience is different on Apple News, so we’re trying to push stories that we think will resonate with that audience, and that also gives us an opportunity to play around and learn from the engagement with those push alerts in the stories that we choose. So we tend to focus more on technology stories, or maybe [a] quirky story . . . [or] business-of-life kind of stories, [or] travel, so different topics that we generally wouldn’t push to the core app audience.

The integration of subscriptions into Apple News, also introduced in iOS 10, has added another layer of complexity for outlets that have opted to place content behind the platform’s paywall. A mobile editor from a subscription-based outlet explained that their Apple News alerts are selected from a very limited pool of free-to-view articles, partly because they do not want to encourage large parts of their audience to become accustomed to consuming their content via a third-party platform (the same rationale some subscription-based outlets have for shunning Facebook Instant Articles):

Probably close to sixty to seventy percent of content goes onto Apple News, but most of it is behind the paywall. We have probably five or six things a day in front of the paywall on Apple News and we only send pushes to things that we free up because the pushes that we send on Apple News go to anybody that follows our channel. So we don’t send the paid push alerts [via Apple News] because we don’t want to train people to consume more news on another channel, where we can’t control the experience, so we basically use it as a prospecting tool and also as sort of a place to expand the visibility of our content. So it’s brand building and it’s also acquisition of new subscribers.

One consequence of this perceived difference between audiences is that Apple News has emerged as a useful space for experimentation, described variously as “a testbed,” “a safer test environment,” and “a prospecting tool.” Among the areas where outlets are using Apple News to experiment are language (e.g., tone and style), emoji use, and dayparting times.
It seems that Apple News has emerged as a safe space for testing because it is assumed that any missteps made during experimentation will not be seen by (and negatively impact) the outlet’s core audience. For example, a mobile editor described how the difference in audiences provided scope for them to conduct experimentation around emojis with reduced risk of upsetting their core audience:

Our audience on Apple News . . . is quite different to people who have the [news brand] flagship app. Based on the data Apple has given, it skews younger, and it skews more female whereas the typical [news brand] audience is older and more male. So yeah, it’s basically a safer testing ground and people aren’t going to say, “Why is [news brand] sending me an emoji?” Hopefully.

It is also possible that some outlets may be reluctant to embrace Apple News because of the limitations of its metrics (analytics are discussed in detail in a later section). One product manager said, “Apple’s analytics are pretty clunky and require a fair bit of cleanup to analyze, so I had been doing that weekly, [but] I stopped doing that just because I didn’t have the time.”

**Benefits of using Apple News**

It should also be noted that numerous interviewees identified benefits from being able to push via Apple News. Among the most recurrent were: increased brand visibility, direct exposure to new/unfamiliar audiences, opportunities to experiment, and opportunities to surface a broader range of output. One product manager said:

I was looking at push metrics for Apple News for a long time, and seeing incredibly interesting and compelling results: a lot of engagement and a lot of signups, great open rates, and so we definitely have seen a lot of success there in terms of using that as a testing ground or sort of reaching that audience with push has been very successful.

Another mobile editor did not have direct experience, but envisioned a scenario where experimentation on Apple News could be used to implement change in their consumer app:

I think it kind of gives us some leverage [to change our broader strategy]. Obviously the audiences are not duplicative, but if we see a lot of success with an Apple News alert . . . we’re able to kind of use that as leverage to maybe convince a stakeholder here who is skeptical of using it in our consumer app—we can kind of use that [success on Apple News] as fodder.

One mobile editor, based at what he described as “very, very much a workday-focused publication,” said that their Apple News alerts get “a lot more engagement on weekends than
one might expect.” This unexpected engagement had, he said, forced them to rethink their overall approach to push alerts and their audience’s tolerance for different types of alerts:

We’ve seen big engagement on some of these things, so I do think that that experience has really pushed us to expand what we think of as an alert for [news brand]. I think maybe when I started doing push alerts, I might have said we should only send people breaking news alerts because that’s what they expect. They only want breaking news. But Apple [News] has helped [challenge that view]. And we experimented somewhat with that on-platform too. There is definitely an appetite for [alerts about] things that people are interested in.

Ultimately, however, decisions over Apple News may eventually come down to revenue rather than brand exposure or scale. Just as we have seen the likes of The Guardian and The New York Times abandon Facebook Instant Articles, it is possible that news outlets will walk away from Apple News if it does not deliver for them financially. As one person put it:

We’re getting increasing numbers of people liking our page and signing up for notifications and we’re seeing them and engaging with them, but the real decision on whether or not we continue to support Apple News is going to be a financial one. So those two things are not very connected right now; it can deliver scale . . . but if we are not able to convert those people into paying numbers then we’ll reevaluate that . . . So we’ve sort of stepped back while other teams are focusing on the business plan around supporting Apple News.

6. How News Outlets Decide What to Push

Breaking news: Worth pushing but not enough on its own

Every interviewee was asked how their outlet deciphers which stories or topics are worthy of a push alert. Unsurprisingly, almost all said that big breaking news stories automatically warrant an alert. Equally unsurprising, given the difficulties of standing out in this saturated field, very few interviewees framed breaking news as the centerpiece of their outlet’s alert strategy.

Many of the people with whom we spoke could recall a time in the recent past when their strategies revolved almost entirely around breaking news. For most, though, this now feels like a distant memory. Indeed, the what, when, and how of alerting non-breaking stories seems to take center stage for most. Even those for whom breaking news is core to their business models,
solving this riddle is the only way to differentiate their push alerts from those of their rivals and counter what one mobile editor described as “the risk that our notifications turn into noise.”

A number of participants spoke in depth about how important they felt it was not to place too much emphasis on breaking news alerts. For example, one mobile editor said:

The reality is that a lot of what we’re notifying people about is the same stuff as other people are too. Hopefully we get it first, but everybody knows that breaking news is commoditized to the point that there’s a question about whether there’s a value in that. I think there still is some [value] when it comes to a push notification because whoever gets it first has an opportunity to get people engaged, but I think as time goes on, all of us in the industry who think about this kind of work are going to start reconsidering what that content should be, and maybe when everybody is sending that [same] push . . . finding a way to distinguish your own news outlet by pointing to explanatory material and analytical material, and having an engaging way to get people there. There might be such value in that that we may at some point sort of pass the breaking news itself. It’s hard to know, but that noise problem is there.

Another product manager pinpointed the rise of social platforms—and, in particular, the frequency with which audiences discover breaking news events via them—as the reason why news organizations must look beyond breaking news if they are to develop a successful push strategy:

Every news publication needs to figure what their schtick is and what they want to have for their alerting: Is it that you’re going to do summaries? Is it that you’re going to daypart [send timed alerts] at certain times? Maybe you’re going to have personalized alerts, or geo-personalized alerts. But they need to pick a strategy for what they’re going to be, and then just make sure that they’re the best at it. And if they do want to be the first ones to break the news, then they just have to make sure that they have eyes on as many things as possible and make sure that they are the first ones. I think that that’s one of the challenges [of push alerts]: news organizations aren’t the first to break the news anymore, so they need to understand what the value is that they add.

Far from treating this as a question for tomorrow, newsrooms are thinking about it today, and almost all interviewees could describe measures they had taken to make their strategies broader, more varied, and more nuanced than just breaking news alerts. While publishers may have previously shied away from alerting non-breaking news—for fear of turning audiences off by “over-alerting,” something which remains a current and legitimate concern for many—this appears to have become progressively more palatable to audiences. As one mobile editor put it,
“The landscape has changed and users have become more accustomed to getting notifications that are not about news, and a lot more publishers are doing them.”

When it comes to alerting big, breaking stories, our interviewees often cited journalistic gut instinct; few people identified any great difficulties in recognizing such events or when they justify alerts. However, identifying which non-breaking topics warrant an alert is much less straightforward. While there were certain commonalities, there were also distinct differences.

**Beyond breaking news: Using push alerts to showcase the news brand and build loyalty**

By far the most common rationale for pushing non-breaking alerts was a straightforward desire to promote the outlet’s strongest and/or most “on-brand” output, whether that was enterprise reporting, in-depth features, or analysis in their specialist field. People from markedly different outlets spoke in strikingly similar terms about using push alerts to promote their outlet’s “signature content,” “upper-tier” content, or stories they deemed “core” to their brand and audience.

Many interviewees described how their strategies had shifted away from an almost exclusive focus on breaking/developing stories to cover (a) less time-sensitive stories and (b) non-news-based output. Describing the evolution of his organization’s strategy away from straight news, one mobile editor said:

> News is first and foremost what we think about when we think about notifications . . . But in addition to reactionary or reactive alerting, which is just us reacting to what the news is, we also have gotten more proactive in the past couple of years in a few areas, one being major enterprise, major investigations, really in-depth features. We do a lot more pushes for those than we used to, and that sort of came about partially as a recognition that that’s what makes us who we are and it’s our signature content.

Thus, from this perspective, push alerts have become a place where news organizations feel it’s important to remind people who they are and what they do best.

This emphasis on brand (“signature content,” “what makes us what we are”)—that is, non-breaking content deemed to embody the news brand, its values, and audience—recurred frequently. An audience manager from another outlet defined their approach by differentiating between “big, obvious breaking stuff” and what he described as “upper-tier” content. At his outlet, he said, alerts from the latter category will typically surface “a story that we as a news organization want to give you the report of, whether it be what our reporting is known for and therefore helps create [the brand’s] values and mission in the U.S., or, in a similar vein, a story that
we’ve spent a lot of time on that we think is valuable, which might not necessarily be a news piece.”

Another editor emphasized the need for coverage to be “core” to the brand and/or its audience in order to reach the bar necessary to warrant a push alert: “I think we look for stories . . . where we can bring expertise or context that is beyond what other people have reported,” she said.

An editor from a regional newspaper acknowledged how a belated shift away from focusing solely on the “need-to-know” of breaking news had provided welcome scope to push additional “want-to-know” content: “We’ve sort of switched to more bigger picture [alerts] and we have finally moved towards doing alerts of things, not just that you need to know, but that you would want to know—investigations, stories that are performing particularly well on the website that aren’t necessarily breaking.”

Following a very similar track, a mobile editor from an outlet with a strong focus on business and finance made a distinction between “need-to-know” alerts and “nice-to-know” alerts. In this instance, the former are often, although not always, breaking news (“whether we knew it was going to happen or not . . . we just want to get it out immediately”), while the latter, of which they typically aim to push one to two per day, were defined as “either our best work of journalism—if we have a scoop or an exclusive, or maybe we have a really cool data visualization—or a really great [brand-specific section] feature that we can push to users . . . It’s not necessarily urgent. It’s more at an editor’s discretion.”

Push alerts were also framed as valuable tools for showcasing the range of an outlet’s coverage and/or presenting an alternative to news and current affairs. On this subject, one mobile manager said an important function of push alerts was to:

. . . give us an opportunity to show readers that we’re not all serious, we have a breadth of coverage, and we also have a breadth of tonality . . . Especially right now, a lot of people are feeling besieged by the political landscape, and [so] having a release from that—call it counter-programming—is really just healthy for everybody. It meets our needs, it shows people that we have all this other stuff, and it meets readers’ needs to have something a little different on their lock screens from us.
Differentiating between Breaking and Non-Breaking News Alerts

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Segmenting provides valuable flexibility and can help shape strategy

The question of what to push is rarely straightforward. There are a number of dilemmas, many of which are tricky to answer with much more than an educated guess. How many is too many? How many is too few? What does the audience need to know? What does the audience want to know? What proportion of the audience needs to be interested to justify a push alert?

The pressure to accurately gauge an audience’s appetite for push alerts is arguably most intense for practitioners working within the confines of apps with limited or no alert categories/segments. To highlight a few high-profile examples, The Washington Post and Fox News apps offer only “Breaking News Alerts”; Bloomberg offers only “Notifications,” while BBC Worldwide notifications are toggled on or off at system.

A Lack of Segmenting Options in the Bloomberg, Fox News, and BBC Worldwide iOS Apps

Certainly, among the interviewees working with apps that offer multiple channels, there appeared to be greater willingness to experiment with the volume of alerts and the type of content being
pushed. One mobile editor summed it up by saying that there is far more freedom to push to segmented channels, because “the bar is lower” than it is with the main breaking news channel. He explained that this allowed them to increase the volume of push alerts with less anxiety about annoying their audience by over-alerting: “We have topical channels that readers can subscribe to, and so we do a lot of pushing to those. We’re definitely more aggressive on those channels because we know that the users have really given us a signal that they want extra notifications on this topic.”

This was a widely shared view. An editor from a regional outlet outlined how the introduction of niche segments has provided valuable space to push on a broader range of topics without running the risk of alienating the core audience, who are unlikely to be interested and may submit complaints (a fate many people had experienced) and/or disable alerts if they feel they are receiving too many alerts they do not consider relevant: “Now that we have these segmented push alerts, we have a lot more leeway to say, ‘Well, this is important in the business world,’ but nobody else cares about it. Now we can segment that audience.”

It is also worth noting that segmented push categories enable publishers to send alerts about topics that fall outside what may be considered their brand’s core areas. As noted earlier, mobile editors typically default to topics considered core to their respective brands when identifying non-breaking content to push. While this is entirely understandable, it arguably carries a risk of pigeonholing an outlet’s alerts or limiting its scope to an unnecessarily narrow range, resulting in high-quality content not being surfaced to interested parties. For instance, it is common for general news outlets, or those with a reputation for specializing in specific areas (e.g., finance, business), to have dedicated, engaged (but not necessarily massive) audiences with interests in subjects that fall outside those most closely associated with their brand (e.g., sports, opinion, innovation, etc.). However, sending push alerts about those less core topics risks alienating or upsetting sections of the general audience, a scenario one interviewee described:

Right now we only have two categories and so the breaking news channel is breaking news, but it’s also a channel where we have been experimenting with putting out some features and some good stuff we wanted to highlight. But there was some cognitive dissonance there and we heard some feedback from readers that they don’t like not-breaking news sent to a breaking news category channel.

One product manager with experience handling the transition to a wider, more varied range of push channels made a very compelling case for why segmented channels liberated his outlet to highlight a much larger range of high-quality output from outside their core areas:
Because we hadn’t had categories before, the breaking news category is seen as: “This should be core [brand] content, this should be what most of our core readers are coming to us for.” That means we skew very heavily towards the financial news, and then of course some of the domestic politics and international-world-conflict-in-politics sort of stories. Things of high importance for the geopolitical scene.

But using the example of sports—coverage which would not typically be associated with his outlet’s brand—he continued: “We have some great sports columnists, people who are pretty famous in the sports journalism industry, and it’s not that it’s random, but for [us] to have some leading sports columnists is, I think, something great that we can do a better job of surfacing for people.” This, he argued, was a perfect environment in which to create an alert channel specifically for sports.

**Breakdown of Segmenting Options by Outlet**

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<th>Publisher</th>
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Of the thirty-one iOS apps in our sample, just over half (fifty-two percent) offered only one alert channel (typically on/off for “Notifications” or “Breaking news”). This was often cited as something of a source of frustration for practitioners who have to work within these confines. One mobile editor from an outlet whose app contains only an all-or-nothing on/off switch for notifications said
that decisions about which subjects their audience would like to receive alerts about are “entirely down to editorial.” The editor added, “We have no other segmentation. People who only want breaking news, or people who only want commodities news, we don’t have any of that. But that is something we desperately want and are begging our product counterparts to build.”

An editor from another outlet with a strong emphasis on alerts described how the presence of topic-specific channels in their app helps to shape their day-to-day push strategy. Their target is to ensure each channel is served equally, so they liaise with individual editors to identify the biggest stories and push those accordingly:

We push throughout the day. There is an editorial meeting in the morning, where we hear what big stories are coming up, so we plan around those, and then we’ll see what stories are coming in on our internal chat room. On our app we have various channels, so we try to push equally among channels, except for [three]. Among the other ones . . . we try to go evenly among those. So we’ll speak with the editors to see what stories they have coming up and push whatever is the biggest story they have for that channel . . . And then breaking is just as fast as possible.

This person’s outlet effectively follows a three-step process. The first two, outlined above, involve the editorial meeting and additional input from subject editors. The third involves an analysis of metrics about how similar push alerts have performed historically. This data factors into decisions about which stories to push, and may result in others being sidelined:

We see what data we have from previous pushes as to what performs well. So, for example, we know . . . space stories, specifically, perform particularly well, so we will definitely push those to the [corresponding] channel. So if we know the team has one of those coming up, we won’t push another story to the channel because we’d rather push that space story.

Other interviewees described a similar strategy of using metrics in combination with other factors. A mobile editor from an outlet that makes heavy use of push alerts throughout the day described how their day-to-day strategy revolves around a combination of (a) specific alerts that occur at the same time every weekday, (b) an effort to send alerts about popular topics such as technology tips “at least a few times per week,” and (c) a user-centric approach to historical analytics wherein incoming stories are prioritized for push if they have strong track record of achieving high engagement. She explained, “We know looking at the analytics we have that, for example, personal finance does really well, so when those [stories] come up for us . . . we’ll probably alert on that because we know our audience and what we think they like.”
Strategies shaped by legacy workflows

For some, the process of identifying which alerts to push is dictated more by tradition and longstanding, pre-mobile workflows. For example, a mobile editor from a news agency described the extent to which their push strategy is influenced by legacy workflows as opposed to newly developed techniques. Although he said this is a situation that “may be potentially evolving in the near future,” they currently have a two-step process for identifying alerts suitable for pushing to the mobile consumer app, which begins with wire alerts that are sent to their customer base.

“The news alert is something that’s been around for years, if not decades, as a notification that goes out on the . . . wire to alert people to breaking news. . . . As it turns out, they feed pretty nicely into a push notification or a tweet as we know them today,” he explained. Consequently, he said, “our [mobile] alerts are, for the most part a subset of those [wire] alerts that we’ve sent to our customers,” with a producer and news manager typically making the final call on which wire alerts should be sent to their consumer app.

Less strategic approaches

While many of the newsrooms featured in this research were able to articulate relatively clear and consistent strategies for identifying push-worthy stories/subjects, it should also be acknowledged that this was not universal, and alerts can often be pushed for less strategic reasons.

An editor from one of the smaller newsrooms we covered admitted that, while there are certain topics that will always warrant an alert—such as breaking news and traffic alerts (“There is really no question about it, that gets you a push alert”), and long reads that the outlet pushes every Thursday—there are also occasions when the rationale can be decidedly less strategic. Sometimes it simply comes down to the need to push something—anything—to their audience. “Sometimes it’s frankly [a case of], ‘We haven’t sent out a push alert today, what could we do?’” Then maybe we’ll say, ‘Oh, we don’t really have much news, but here’s a story about things to do on the weekend. Let’s just send that out and kind of word it in a way that’s, like, ‘Look, there’s something to do,’ ” she said.

Elsewhere, a front-page editor from a digital native said that mobile currently “took a backseat” at her outlet. Consequently, decisions about push alerts are informed in no small part by what has splashed on the homepage. As she put it, “There isn’t a big strategy for [push alerts] . . . it’s usually just the front page being like, ‘OK, this the story and it needs bringing attention. We should push it out.’”
Pushing national news at the local level

For journalists at local/regional outlets, there is an added consideration over how much national/global news they should push—if any. An editor from a regional newspaper with a lot of experience around alerts described this as “something that we still grapple with.” For her, their audience’s primary expectation was to be alerted to regionally specific news, but she still felt an obligation to push big national or international stories:

   Basically, we want to show off what we specialize in. You didn’t sign up for our alerts to get alerts of AP or Washington Post stories, both of which are wire services. But if, for some reason, we are the only alert that you get, we do have a responsibility to tell you about certain things that are happening in the world.

Still, she added that establishing the sweet spot in terms of the geographical scope of their alerts—city versus state versus region—was an ongoing challenge: “We’re just struggling to figure out where exactly we fall for readers, because obviously we are the go-to source for [city] news; for many, statewide news; and for some people, Midwest news.”

One editor who had moved from a small, local publication to a bigger one articulated how she had seen the approach to covering more micro, regionally concentrated topics such as travel or weather get fazed out as strategy evolved:

   Our strategy, going back three years, used to be a lot more, “Breaking news, this is what people need to know,” like, “This road is shut down” or “This weather alert has been issued.” Those worked well with the smaller paper that I came from, but in a city of this size, I just don’t know that that’s the best news to be sending out to potentially millions of people, that one road is closed that they most likely won’t be traveling on.

This evolution, she said, has had a marked impact on their overall strategy, allowing them to “move more from breaking news, one-off stories that didn’t actually affect a lot of people, to a bigger picture showing off the stuff that we’re really proud of.”

Case Study: Regional News Apps

A total of 303 alerts were sent by the eight regional outlets in our study. These were analyzed to assess the extent to which they focused on regional stories. This was another area where the findings of our content analysis largely reflected what we had been told in interviews. Overall, eighty-four percent of these alerts related to regional matters. Even at the lowest end of the
scale, almost two-thirds of the alerts pushed by the *Los Angeles Times* (sixty-two percent) and the New York *Daily News* (sixty-nine percent) had a regional slant.

These regionally focused alerts typically took one of two forms. They were either about regionally specific events (e.g., “Fighter jet on fire at Houston airport,” *Houston Chronicle*, June 21) or they presented a regional angle on a story with broader resonance, such as a local politician’s position on a national debate (e.g., “Wisconsin Republican Ron Johnson objects to his party’s push for Obamacare repeal vote by next week,” *Milwaukee Journal Sentinel*, June 21).

Collectively, our data supports the finding that while regional outlets are primarily focused on pushing regional stories, they will still use push news from further afield if they consider it relevant to their audience (e.g., “BREAKING: The Supreme Court has reinstated President Donald Trump’s travel ban,” *The Seattle Times*, June 26).

**Proportion of Regional versus Non-Regional stories Pushed by Local News Outlets, June 19–July 7, 2017 (n=303)**
Deciding What to Push: Section Summary

- Breaking news alerts, once the centerpiece of many news outlets’ alert strategies, are now almost secondary as many outlets become aware they must find other ways to make their alerts stand out on increasingly cluttered lock screens. In our study, forty-three percent of 2,087 alerts received from iOS apps were about non-breaking news (ten publishers sent more non-breaking news alerts than breaking news ones). On Apple News, around three-quarters of alerts were about non-breaking news.
- Over the last year or so, many outlets have felt emboldened to push more nice-to-know alerts, in addition to need-to-know ones. Many cited push alerts as a particularly strong way to surface output considered core to their brand or audience.
- Some outlets are implementing a user-centric approach to selecting push alerts, using data about what has previously played well with audiences to inform decisions. Consequently, past performance of similar alerts can be the determining factor in what does or does not get alerted.
- Segmenting provides the opportunity to surface output that may not necessarily be deemed appropriate for the outlet’s main alert channel. However, levels of segmentation differ greatly from one outlet to the next, and many people whose outlets’ apps do not provide segmenting want their product teams to implement it.
- Segmenting also produces a new host of challenges, as it is not necessarily straightforward when it comes to identifying and agreeing upon segment channels; it is not always obvious which segments to push to, and making app users aware of segments/channels and onboarding can be tricky.
- Regional outlets are grappling with their responsibility around alerting their audiences to national/global news and how best to strike an appropriate balance. Our data showed a very strong tendency to stick to regional stories, with eighty-four of alerts from regional outlets focusing on stories with a regional focus.

7. Objectives for Push Alerts and Notions of Success

When assessing interviewees’ objectives for their push alerts, five themes emerged:

- Not to annoy the audience
- To inform succinctly from the lock screen
- To build brand recognition and loyalty
- To drive traffic into the app
- To retain users in the app
Objective 101: Don’t annoy the audience

Push notifications are arguably among the most intimate, most direct connections news organizations have to their audience. Less generously, they are also among the most intrusive. Asked about their objectives for push alerts, many people’s impulsive response was to say their first goal is always to avoid annoying their audience.

One audience manager ordered his priorities as follows: “First of all, I hope it doesn’t piss them off, if I’m going to be completely frank. I hope we get it right and we reach them with a story they think is either valuable or important—and that they don’t ignore it.” Another mobile editor said, “My thing with the push alert is: A successful push alert is any push alert that doesn’t cause somebody to turn off push alerts. So if we didn’t annoy you, it was a successful push alert. We want to give our readers as much information as possible, so that if they open their phone and they read the push alert, they can put their phone back in their pocket.” Providing depth within the limited confines of the lock screen has become a key priority for a large proportion of outlets.

The drive to inform directly from the lock screen

While there may be a lay assumption that the primary utility of push alerts is to drive traffic into apps, the overwhelming majority of interviewees said their main objective is actually to craft alerts that are so informative that users will not need to venture beyond their lock screens. For some, an alert that leaves so many questions unanswered that readers are forced to tap into the app to find answers is the definition of a bad alert.

One editor said their team aims to send out alerts that pass the “dinner conversation test,” meaning that “someone can read your push alert and grab a tidbit that they can then talk to their friends at dinner about without needing to tap into the story and read the whole thing.” Similarly, a product manager from a global publisher described his outlet’s commitment to crafting alerts this way: “The language . . . will always provide enough information so that if a reader were to get their notification they would understand the basis of the story. We’re not trying to tease people to get them to click through, or bait them in that kind of way.”

Another editor described the tension between external visions of success (high open rates) and the approach his team has fostered:

I think a successful push notification is one where somebody opens their phone, looks at it, says, “That’s interesting,” and puts their phone back in their pocket. All I want is for our readers to feel like they’re informed or they’re interested. If the pushes do that, to me that's success and that's fine . . . We do measure success based on how many people tap
on the notification, but that's not the be all and end all to me. The be all and end all to me is: did users find this useful or not?

(This tension between different interpretations of success is covered in more detail in the section titled “Challenges.”)

Given the inherently limited nature of push alerts, informing effectively—and to the extent that an alert alone can provide sufficient value and context—is clearly a challenge and a skill. As noted, one does not have to delve far into recent history for a time when the typical alert was little more than a headline designed to entice users into the app. However, the culture and mindset has shifted and many interviewees argued that alerts are worthy of the craft and attention afforded to other, more traditional types of newsroom output. Describing her organization’s approach to push, one product manager said, “Product and editorial really view an alert as a piece of content in itself, so [we ask:] how do we make it add the most value for our users [in return] for signing up for these alerts?” Another said, “We treat push notifications as a product in and of itself”.

Accordingly, multiple people argued that there is a groundswell around the notion that push alerts should be treated as a unique form of short-form storytelling (see Welsh et al., 2016). As one put it, “We think about storytelling in stories, or in videos, or in Snapchat, but never on the lock screen . . . I mean, look, you need people to click into the app because you need those numbers, ultimately, that’s the sad reality, but let’s say you didn’t, I think what Mic’s doing is fascinating with its lock screen alerts.”
This view was evident elsewhere, such as in this mobile editor’s assessment that well-crafted language always takes priority over soliciting clicks:

If it’s a news notification, did we clearly tell you what the news is? . . . That’s the primary: Did we tell the truth, and did we characterize something in a way that helped you really understand the context? Did we use language that [told] a good story? Did we include good details? There’s the writing: that’s one aspect of it that’s very important to me, and very important to most of the people here who are editors who take language very seriously.

It should also be noted that those strategies that prioritize informing from the lock screen over driving traffic into apps are sometimes at least partially born out of rather gloomy assessments of contemporary digital journalism. One person argued that a major factor in their decision not to focus solely on open rates was that they don’t necessarily reflect how audiences engage with apps:
I think, yes, we want to write alerts that get people onto the app, but to be honest, I think when you’re thinking about alerts... click-through rates industry-wide seem to be pretty low with app alerts... I don’t think we talk about it often, but people aren’t really clicking and I think most people who use the alert think, “OK, there’s the news, and if I’m interested I’ll find a way to read more about it, but now I know.”

Another was even more downbeat:

We really probably should care about getting them into the app, and it’s so hard to measure, but to us a good alert is when someone looks at their phone and says, “Oh, that’s interesting,” and then they either open and read more, or they got the information they needed and call it a day. Getting a couple people to open the app isn’t going to save the industry. We’re just trying to show off our best stuff and give people some value to interacting with our brand.

...But driving traffic is still important

Despite the dominant discourse around informing from the lock screen, most people admitted that driving traffic into their app had to be their ultimate end goal—whether they liked it or not.

In many cases, there’s a lack of meaningful metrics around push alerts (metrics are discussed in more detail in a later section). But in a newsroom culture where metrics are king, a high degree of importance is placed on the few that are available and/or easily comprehensible. This, for many (although not all), means a strong emphasis on open rates. One mobile editor admitted, “I think everyone views a successful alert on some level as something that people click into: you can measure it with traffic. It’s easier—it’s the kind of a vanity alert way of saying it was a success.”

Another front-page editor pointed to the lack of engagement options in her outlet’s alerts as the reason for focusing on open rates:

At the moment, because there’s no other way for [the audience] to interact with our notifications, it’s all about getting them into the app. We don’t have a share button or [reaction] button that you could use from the notification, so our main goal at the moment is to get them into the app, either through a direct open or an influenced open.

In some cases, the level of app traffic generated by alerts plays a strong role in shaping overall strategy, with key players keen to understand which of their outlet’s recent alerts have performed particularly well. Still, one person articulated the balancing act newsrooms face when it comes to creating a shared vision of success, noting that while her team monitors their alerts’ contribution
to app traffic on a daily basis, they have to remain cognizant of not over-emphasizing its importance:

Every day we look back at how the previous day’s alerts performed in terms of unique [active users]. And that’s really the big number we look at. We’ve got an overarching goal for the number of uniques we want to get into the app every day and we know that push alerts can be a significant driver, so we try to pay attention to what alerts did well in terms of driving people to the app. At the same time, the editors understand that the success of a push alert can’t only be measured by traffic driven to the article. I think an alert can be very successful if very few people click on it but they got the information they need in a very timely fashion, so that’s kind of a balance that we try to strike.

Retention is important but so far success is mixed

Of course, news outlets are not fixated solely on getting users into their apps via push alerts. There is also considerable interest in how users behave once they are there; understanding how to keep them engaged and retain app users on-platform after they have tapped an alert is key. For example, one product manager emphasized using alerts to bolster session time with both the subject of the alert and other content within the app:

I like to get them into the app. I like them to spend a good amount of time reading the story, which is something that, based on results, we seem to be able to do through push notifications. Ideally, then I’d like them to go and read another story that’s either directly related to what they’ve just read, or is just another [brand] piece. I’d like to hook them, keep them looking through, get them to read more than one thing.

Others have not yet managed to achieve the same kind of success. As one editor said, “We’re interested in sessions for the app, but that’s not really necessarily tied to push alerts. Because we do find that people engage with the push alert, but they probably don’t consume any other content once they get into the app. So that is a goal that we have here: how can we change that?”

Breaking news alerts carry different—lower—expectations

Outside of specialist markets, by their very nature breaking news alerts tend to be almost indistinguishable from one app to the next, not least because news outlets are often relying on the same, limited sources of information. Across the interviews, even among folks based at outlets that place high value on open rates, there was an acceptance that breaking news alerts rarely drive a significant amount of traffic. Many outlets instead strategize around how best to engage their audience on breaking news events after the initial alert. This typically takes the form
of follow-up analysis or opinion, which will hopefully capitalize on the interest generated by the original event and draw users into the app in a way that an initial, more generic alert would not.

One mobile editor described this approach as central to her organization’s push strategy:

If it’s a breaking news alert, I don’t really expect as many people to engage with it. So part of our push alert strategy is to focus on the follow-up alerts. We might send a breaking news alert that pretty much everybody else is going to send, and the text probably won’t be that much different because we’re all going to have the same basic information and we’re all sending it at the same time. So then we try to focus on: Is there a follow-up alert that we can send to this? Is there a market reaction where we’re going to have the scoop or the analysis or the context on that?

This strategy can also apply to major, scheduled events. One editor described how they not only use alerts to draw traffic with post-event analysis, they also attempt to do so in “the walk-up to big news”:

We had some success with the French election and our Brexit coverage with walk-up alerts where we’re teasing people to what’s about to happen but giving them that extra context. We find that those alerts before the event and after the event can perform a lot better, and the after-event [alert] will have a longer tail . . . We actually saw with the Syria missile strikes—we sent the initial alert about that actually happening at the same time as most other organizations sent their push alerts. But we sent one maybe within the hour of that—I think it landed about eleven p.m.—that basically just said, “Here’s how the markets reacted to the Syria missile strike.” And that push alert actually performed better in terms of uniques than the initial alert and it had this crazy long tail where we saw people were engaging with it at six a.m. the next morning. So it had a huge initial spike but then this really long tail, which doesn’t often happen with alerts.

Building brand recognition and loyalty

Another recurrent theme—intrinsically tied to everything already discussed in this section—was the importance of push alerts for building brand recognition and loyalty. Many interviewees were acutely aware that the average person uses a relatively small number of news apps, so push alerts play a vital role in engaging and retaining their mobile audience, developing a news habit, and cementing strong relationships.
An editor from a regional outlet said she views alerts as an important “part of building our brand and being the organization that people want to come to for information.” A mobile editor from a subscription-based outlet pointed to push alerts as one of the foremost ways through which they foster and build strong ties with their keenest readers:

Remember, our app is our closest lifeline to our most dedicated audience. Most people have maybe twenty to thirty apps on their phone altogether. Maybe they have one news app; maybe for real hardcore news hounds they might have two or three. So people that have our app have gone out of their way to find us in the App Store, look for us, and download it. Those are our most dedicated readers. They love the [brand], so we should be giving them the best possible experience that we can, and push is just an extension of that.

Another product manager argued that, in an environment where many people discover news via tech platforms such as Facebook and Twitter, news organizations must never forget that their own apps are “prime real estate on someone's phone” and push alerts “really add extra value” when it comes to convincing their audience to retain and engage with their brand.

Indeed, this focus on push alerts as a conduit to audience retention recurred across multiple interviews. A product manager from a news agency said:

Ultimately, I think the value of your alerts actually helps with retention as much as it helps with engagement. So I think it’s important to have that regular nudge to people in a very respectful way that says, “Hey, we’re here, we’re keeping an eye on things and here’s what's happening in the world”. . . . It’s about creating a respectful experience, so people don’t delete your app and are interested in learning more about you and what you do.

Elsewhere, even outside of someone’s direct interaction with an app, multiple people—all based at digital native outlets—said they consider an alert to be successful if it generates a buzz on social media platforms. One noted, “It’s always good when people react to the splash on social media. . . . So maybe they don’t open the notification, but [if] once we send the alert out, we see a bunch of people reacting to the language then that’s good for us.”

Conflicting thoughts over the need for speed

One important area where attitudes may be shifting is speed. On one hand, there is no denying that speed remains an important consideration for many. A mobile editor from a news agency argued that speed was one of the foremost ways through which his outlet delivers value via push:
“Very often, when we put out a push, it is news that not anybody else can tell—we get a lot of things first, and a lot of the value that we bring to the news ecosystem is getting things first.”

A product manager asserted that the main objectives of push alerts for her organization was “building a reputation for being the first to inform and add value.” Another product manager, who has knowledge of implementing alert strategies at multiple news outlets, described how her current organization’s CMS was designed to prioritize speed and questioned the wisdom of introducing additional features if they risked hindering the pace at which alerts could be pushed out. She said, “They tried to optimize [the CMS] to get the alert out as fast as possible. So it was designed to be simple to achieve that—the less-is-more mentality. Expanded alerts or other alert features? Is this going to be another obstacle for editors getting the alert out as fast as possible?”

However, for all that speed does factor into many outlets’ strategies, a significant proportion of people said that it has become less of a priority for them. One mobile editor said, “We have changed our thinking about [speed] enormously in the last year,” although he added that it remains something that “is valued by some of my bosses and [something] I feel like I fight over every day.”

Multiple people cited their knowledge of user behavior data as a factor in concluding that speed should not be a priority. For example, the same mobile editor explained how his team’s improved understanding of how users engage with push alerts, and the expectations they have, forced them to reassess their attitudes toward speed:

When we first started sending out notifications, which was probably three or four years ago, we just had the headline . . . and our goal above all was to get it out fast . . . When we first started sending out notifications we were thinking of it in terms of the way we think about newswire notifications, the goal of which is to be the first one out of the box and to give people information as quickly as possible . . . But the more we looked into the data, the more we found that’s not the way people engage with push notifications. It’s really not like a wire headline at all, it’s much more personal than that and people don’t like headlines.”

Another mobile manager with a strong understanding of data around user behavior said that it was a priority for him to understand more about his audience’s attitudes toward speed, hypothesizing that users probably don’t attach the same level of importance to it as people elsewhere in the organization may assume:
I will say [speed] has probably become less of a concern for me, just as I’ve learned more about our audience and their news habits. This is something that I want to ask our users. We’re going to be doing some user research on notifications and we’re really interested in this question of: If we send out the notification ten minutes after they see the news elsewhere, are they annoyed about that? Do they think less of us because of that? I would guess that they probably don’t care as much as we think they would.

Indeed, speed was an area where interviewees were often reflexive about how far removed their own use of news apps is likely to be from that of their audience. As one put it: “For most users, the question of whether we’re before the Times doesn’t matter one iota because they only get one push alert. They don’t have multiple news alerts on their phones.” This was echoed in striking similarly terms elsewhere:

I think there was a notion out there that readers were much more tuned in and clued into the news than they necessarily are. Even in this day and age, in the age of Twitter and the news cycle, we are so much more plugged in as journalists than the average person and we need to constantly remind ourselves of that. And that’s something that the data bear out. So just because the Post alerted it a half-hour ago, chances are most of our readers don’t get their push notifications, and most of them are probably not staring at Twitter seeing this like we are. So I think as we’ve learned more about our audience, a lot of people around here have kind of realized that [the audience] still relies on us to report the news and just because we’re not the first to do it doesn’t mean that we shouldn’t take that responsibility of keeping people informed seriously, and [we have] to put our pride on the back shelf and not to be too worried about who got it first and whether we’re a few minutes behind.

Another mobile manager took this further, arguing that old-fashioned competitiveness between newspaper brands should not be applied to push alerts. For him, speed took a backseat to well-crafted language, and while he sensed a changed in attitude within the newsroom, that progress remained gradual:

Newspapers are particularly competitive with each other, and I think with CNN and BuzzFeed and everyone else too . . . For years, The Washington Post and The New York Times and The Wall Street Journal have competed against each other for scoops and there’s this sort of ingrained idea that we have to beat them. So you definitely will see people say, “Oh, we beat The Washington Post by ten minutes,” or “The Wall Street Journal alerted this, we’ve got to get our alert out there,” but I’m trying to encourage people to pay less attention to that and pay more attention to, “Let’s write the best alert
that we can . . . I think that should be the goal more than being first. That view, I think, is becoming a more common view but we still see people and hear people kind of prioritize speed.


During our sample period, thirteen stories received alerts from *The New York Times*, *The Wall Street Journal*, and *The Washington Post*. Of these, *The Washington Post* was first to alert seven, *The New York Times* was first with four, and *The Wall Street Journal* was first with three. (There is a total of fourteen because *The Wall Street Journal* and *The Washington Post* alerts about Karen Handel winning the Georgia House seat carried identical timestamps.)

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<td>1</td>
<td>10:16 p.m.</td>
<td>10:17 p.m.</td>
<td>0:01</td>
</tr>
<tr>
<td>Resignation of Travis Kalanick</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1:31 a.m.</td>
<td>2:25 a.m.</td>
<td>0:54</td>
</tr>
<tr>
<td>Obamacare repeal bill unveiled</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>9:58 a.m.</td>
<td>10:56 a.m.</td>
<td>0:58</td>
</tr>
<tr>
<td>Trump admits he didn't record Comey conversations</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1:13 p.m.</td>
<td>1:19 p.m.</td>
<td>0:06</td>
</tr>
<tr>
<td>Senator Dean Heller opposes health care bill</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3:19 p.m.</td>
<td>3:46 p.m.</td>
<td>0:27</td>
</tr>
<tr>
<td>Event Description</td>
<td>Relevance Count</td>
<td>Sentiment Count</td>
<td>Year</td>
<td>Time of Day</td>
<td>Time Delay</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-----------------</td>
<td>-----------------</td>
<td>------</td>
<td>-------------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>Travel ban partially allowed</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>10:40 a.m.</td>
<td>11:12 a.m.</td>
<td>0:32</td>
</tr>
<tr>
<td>CBO assessment of GOP's health bill</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>4:22 p.m.</td>
<td>4:32 p.m.</td>
<td>0:10</td>
</tr>
<tr>
<td>EU fines Google</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>5:52 p.m.</td>
<td>5:58 p.m.</td>
<td>0:06</td>
</tr>
<tr>
<td>Delay to health care vote</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1:57 p.m.</td>
<td>2:10 p.m.</td>
<td>0:13</td>
</tr>
<tr>
<td>Cardinal George Pell charged in Australia</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>8:26 p.m.</td>
<td>9:34 p.m.</td>
<td>1:08</td>
</tr>
<tr>
<td>North Korea says it successfully launched a missile</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>2:38 a.m.</td>
<td>2:50 a.m.</td>
<td>0:12</td>
</tr>
<tr>
<td>Trump says he pressed Putin about election meddling</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1:49 p.m.</td>
<td>2:11 p.m.</td>
<td>0:22</td>
</tr>
</tbody>
</table>

On average, there were twenty-six minutes between receipt of the earliest and latest alerts from these three outlets. In one case—the story of Cardinal George Pell being charged with historical sex offenses—over an hour passed between receipt of the earliest alert, from The Washington Post, and the latest, from The Wall Street Journal.
<table>
<thead>
<tr>
<th>Minutes between earliest and latest alert</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–10</td>
<td>3</td>
</tr>
<tr>
<td>11–20</td>
<td>3</td>
</tr>
<tr>
<td>21–30</td>
<td>3</td>
</tr>
<tr>
<td>31–40</td>
<td>1</td>
</tr>
<tr>
<td>41–50</td>
<td>0</td>
</tr>
<tr>
<td>51–60</td>
<td>2</td>
</tr>
<tr>
<td>60+</td>
<td>1</td>
</tr>
</tbody>
</table>

The Washington Post Was First to Alert Seven of the Thirteen Stories Also Alerted by The New York Times and The Wall Street Journal
(Alerts were received from AP News for twelve of the above stories. Of these twelve, AP News alerts were received ahead of those from *The New York Times*, *The Wall Street Journal*, and *The Washington Post* on eight occasions.)

**Objectives and Success: Section Summary**

- For people working with push alerts, the stated goal is to ensure their audiences are sufficiently informed directly from the lock screen. This goal often supersedes the desire to drive audiences into the app—even though this is one of the foremost metrics through which “success” is quantified. Over half of the alerts in our sample were coded as providing additional context (fifty-five percent), as opposed to being headlines, teasers, or round-ups. Publishers on Apple News were far more inclined to use teasers on their Apple News alerts than on those sent from their own apps.
- The culture and mindset around push alerts may be shifting, with many people saying alerts are treated as a product/piece of content in their own right. Consequently, alerts are viewed by some as a unique form of short-form storytelling.
- Despite the dominant discourse around informing from the lock screen, most people concede that driving traffic into their apps still has to be their end goal—whether they like it or not. This is at least partially because open rates are among the most widely used and understood metrics.
- Newsrooms report varying levels of success in terms of retaining people in their apps once they have entered via a push alert.
- There is a perception that breaking news is generally less likely to drive traffic into an app. Consequently, some outlets are prioritizing alerts about follow-up analysis/opinion in an attempt to capitalize on the initial buzz generated by the original news event. Additionally, some outlets have found success with alerts pushed in the build-up to scheduled events.
- Many practitioners view push alerts as one of the most potent means for developing strong ties with their audiences, building brand loyalty, and enticing them to develop a news habit. On this, many argue that retention is at least as important as engagement.
- While speed does remain important for some, a number of people argued that it is no longer as critical as it once was. Practitioners said that the focus on speed is rooted in outmoded notions of inter-organizational rivalry and does not necessarily apply to push alerts because audiences do not carry and compare as many news apps as journalists. From this perspective, journalists could do better at thinking like their audiences and recognizing the differences between themselves and the people that consume their work. This, it is argued, will help them achieve a more user-based approach to their alert strategies.
8. How Are News Outlets Handling Rich Media in Push Alerts?

Android was well ahead of iOS when it came to rich notifications. While the ability to include photos in expanded alerts arrived in Android 4.1 Jelly Bean, unveiled in June 2012, this functionality did not make its way to Apple devices until the release of iOS 10 in 2016.

As such, the two main mobile operating systems have now facilitated rich notifications for over a year. This seems to be an area every newsroom is keeping an eye on, even if a number are not currently implementing them.

Assessing when to implement rich media in push alerts

Enthusiasm for implementing rich notifications is partly dictated by their perceived suitability to the news brand. For some, they are a very natural fit. One interviewee with experience of implementing video-based alerts in a previous job described the decision as something of a no-brainer for that outlet. “They’re a very visual brand. That’s what [their brand] was built on, the fact that they’re visual and fun. Video seemed a really, really perfect fit,” she said.

Practitioners from outlets that have started using rich notifications stressed that there is a clear line in terms of when it is and is not appropriate to include photos and video in push alerts. Multiple interviewees noted they would not attach photos or videos to alerts about distressing topics such as terrorist attacks or vehicle crashes, for example. One product manager described a workflow wherein an editor has to approve the choice of image/video before a rich notification is sent. Some publishers have created guidelines to try and systematize this process and help staff determine (a) when to include media assets and (b) how to select them.

A mobile editor described her newsroom’s approach as follows:

We do try to send images, there’s always images with the story, but it is also part of our job to pick really strong images to go in the app. So when we’re thinking of an image for the alert, we have a set of guidelines for the images and when we use them. If it’s about a bombing it’s not appropriate to use an image because I don’t think you need to see that. If it’s about Elon Musk explaining why he kept tweeting “I love floors,” we use an image of Elon Musk.

The level of autonomy publishers have when selecting media assets for rich notifications often comes down to the flexibility of their internal tools. Some are able to choose any photo or video
they wish; others are forced to use the first media asset embedded in the attached story. The latter is typically a result of internal systems and tools that prioritize speed (e.g., syncing push alerts with tweets, the front page of the website, etc.). One person described their system, saying: “Our push notification tool is connected to the tool we use to edit the homepage. They’re all part of one suite of editorial tools, so normally the language or the picture that you have is just carried across and you can tweak the language, but not the picture.”

This inflexible system of automatically embedding the first photo from the article into the push alert can create headaches for editors, and some believe it may negatively impact the user experience. One homepage editor explained how their outlet had abandoned rich notifications because they felt the imagery attached to their alerts was becoming too repetitive and uninspiring. “We tried with the photos, but it just wasn’t working that well because so many of our stories are politics so most of the time it would just be thumbnails of white men, which wasn’t ever that exciting,” she said.

When this subject arose in another interview, a mobile editor described frustration at the frequency with which identical images were used repeatedly across similar stories (which, in turn, meant identical-looking alerts were being pushed). This, she argued, is an issue that requires deeper consideration across departments. “That’s something where the newsroom needs to be thinking more about what imagery they’re using, and I don’t think they do . . . It’s laziness to not have a different photo because it’s ultimately a bad user experience.”

**A Series of Similar-Looking Alerts, All Pushed from the Same Publisher on June 26, 2017**

![Series of Similar-Looking Alerts, All Pushed from the Same Publisher on June 26, 2017](image)

The introduction of video, in particular, creates a dilemma for publishers that use push alerts to drive traffic into their apps. Specifically, how do they achieve the balance between providing enough information to make an alert-based video engaging and valuable, while still incentivizing audiences to launch the app? While Mic is one publication that has built its mobile brand around informing almost exclusively from the lock screen (negating the need to drive app traffic), others still hope to get users into their apps—either because it is their explicit, stated goal or because it is the metric through which success is measured.
Approaching rich notification from this perspective, a product manager envisioned a scenario where video could be effective as a tease to drive traffic: “Obviously, when it comes to something like video, you would want to show them the video, but you maybe wouldn’t want to give them everything, with the sound, so as to make them launch the app. Just give them the tease of the information.” While this may make sense in the current landscape (although audiences’ tolerance for being teased remains questionable), as rich notifications become more ubiquitous it will be interesting to see if trends shift toward the Mic model. In this case, the desire to inform from the lock screen will supersede the notion of teasing users into clicking (i.e., alerts will be judged by how they perform outside the app).

Although a number of outlets have been slow to embrace rich media in their alerts, many interviewees expressed excitement about the potential and described conversations they are having internally about how to implement the technology eventually. That being said, this was often tempered by skepticism about whether they would see payoff in terms of user engagement. One mobile editor said:

> I think having a more complete multimedia experience in push is something we’d love to do. To be able to watch a video from expanding a push, that would be really cool as a user. It would be really cool for us to be able to get video in front of our readers . . . There’s so much possibility there, but to reiterate, I do think [because of] the way the design is right now, I don’t get the sense that a lot of users even know that you can expand notifications.

This person, like many others, went on to say he was yet to see any solid data showing that rich notifications led to higher engagement or an improved user experience. Across our interviews, there was a sense that publications were unlikely to pursue developments with images and videos with any great fervor until there was reason to believe audiences would welcome (or at least recognize) it.

Indeed, an interviewee from one of the outlets that has embraced rich notifications described how they had curbed their use of videos due to a combination of (a) underwhelming engagement data and (b) technical problems. A strong contributing factor to the former, they said, was that their audience was reluctant to engage with something as alien to them as lock screen videos. “ Basically, users weren’t used to it so they didn’t even watch. If we put a play button on it, or if we said, ‘This is a video,’ users still weren’t really engaging on their lock screen, which is one of the other reasons that we walked back on sending videos.”

For some outlets, adding media elements is not an immediate priority because there are other aspects of their push alerts that need ironing out first. For example, an audience manager from a
A major global publisher explained, “At the moment we’re trying to nail down the basics of getting the language right and reaching people consistently before we add new features.” Similarly, a mobile editor from a regional newspaper suggested that while they have the technical capabilities to send rich alerts, they have prioritized other aspects of their strategy, adding, “We have not waded into those waters at all. On our list of things we want to be doing better, that [adding photos and video] is very, very low.”

One point we heard repeatedly was that introducing features such as rich notifications is not necessarily—indeed, often cannot be—a quick or straightforward process. Nor can publishers think too far outside the box. Instead, they are bound by Apple and Google, and whatever design and functionality they bake into their operating systems (e.g., as noted earlier, Apple took much longer to implement rich notifications than Google, so publishers were unable to embed photos/videos into their iOS alerts even if they had wanted to). On this, one mobile editor reflected, “It’s interesting how Apple sort of creates these things, and it’s up to publishers to grab those opportunities . . . To some extent, what Apple does will dictate what we do. But I think a lot of publishers have very limited resources and so they’ve got to really believe that it’s worth it.”

Even when publishers conclude that such opportunities are worth pursuing, considerable resources may still be required to develop and implement necessary changes, whether they’re updates to the consumer app or to the internal systems/tools used to publish alerts. One mobile editor described how her team had wanted to add rich notifications to their iOS app for some time, but had been unable to due to the development work required. “Even though Apple offers the capability for iOS 10 notifications to have images or video, there still needs to be development work app-side for that to be possible. There’s no open-source plug and play for that,” she said.

Additionally, some interviewees described how gremlins at the operating-system level had forced them to curtail their use of rich notifications while they waited for fixes to made. One person said:

We can push video, we have that ability, but we’ve encountered a couple of technical problems with it. Sometimes it takes too long to load, or other times it just won’t load. So we’ve held back lately on pushing video, just for user experience. I mean, the app is still growing and we don’t want the users that we do have to have a bad experience.

Another described a similar experience when attempting to use photos: “We experimented with photos for a second, attaching them the way that NBC does with all of theirs, but the thumbnail got messed up on Android and those ones looked really different on Android, so we got rid of them [across all platforms].”
**Emojis 😊👍 or 👎?**

If asked to identify the topic about which interviewees spoke most animatedly, the answer would easily be emojis. One mobile editor spoke on behalf of many when she said, “I never thought I’d be professionally thinking about emojis.” But thinking about them they are—and in considerable depth. Over the course of the interviews, a number of themes emerged around when, where, and how emojis are an appropriate addition to a push alert.

**Brand is a key consideration when weighing emoji use**

Across our interviews, it was clear that brand is the most important factor when deciding whether or not to incorporate emojis into push alerts. One mobile editor summed up the strength of feeling by saying, “Brand-wise [emojis] are something that we’re moving with a lot of trepidation around—even though I know other apps are very emoji-happy.”

**Use of Emojis in iOS Alerts Received June 26—July 16, 2017**

<table>
<thead>
<tr>
<th>Position</th>
<th>Publisher</th>
<th>Total emoji used</th>
<th>Emoji used</th>
<th>Proportion of alerts containing emoji</th>
<th>Most emoji in a single alert</th>
</tr>
</thead>
<tbody>
<tr>
<td>👉</td>
<td>CNI</td>
<td>206</td>
<td>🎉_datetime, 🎉_rain, 🎉_sun, 🎉_snow, 🎉_sunrise, 🎉_sunset, 🎉_weather, 🎉_zebra</td>
<td>124/234 (57%)</td>
<td>4</td>
</tr>
<tr>
<td>👉</td>
<td>Q</td>
<td>91</td>
<td>🎉_camera, 🎉_cheese, 🎉_lens, 🎉_lens-flare, 🎉_magnify, 🎉_selfie</td>
<td>90/91 (99%)</td>
<td>2</td>
</tr>
<tr>
<td>👉</td>
<td>R</td>
<td>38</td>
<td>🎉_arrows, 🎉_chart, 🎉_down, 🎉_line, 🎉_rise</td>
<td>24/123 (20%)</td>
<td>2</td>
</tr>
<tr>
<td>👉</td>
<td>E</td>
<td>32</td>
<td>🎉_barometer, 🎉_humidity, 🎉_pressure, 🎉_temperature</td>
<td>21/90 (23%)</td>
<td>2</td>
</tr>
<tr>
<td>👉</td>
<td>Mic</td>
<td>2</td>
<td>🎉_mic, 🎉_speaker, 🎉_voice</td>
<td>2/78 (3%)</td>
<td>1</td>
</tr>
<tr>
<td>👉</td>
<td>Mic</td>
<td>2</td>
<td>🎉_mic, 🎉_speaker, 🎉_voice</td>
<td>2/98 (2%)</td>
<td>1</td>
</tr>
</tbody>
</table>
Multiple people from traditional news outlets were adamant that emojis would not be appropriate for their brands. One editor from a regional metro said, “We are not comfortable, as the 170-year-old institution that we are, using emojis yet, especially in push alerts,” adding that her outlet was still even reluctant to use emojis in social media posts.

A producer from a smaller, local outlet admitted that both she and her organization were also struggling with the cultural shift toward emojis as an acceptable form of communication, even via their social channels:

> It’s definitely been kind of a culture change I think for us, and for me even, to be like, “Oh, yes, we should include emojis.” It’s even hard for me to just be like, “OK, that’s fine to do,” even with Facebook posts. I think we’re getting around to doing them a little bit more with Facebook posts, but with push alerts we definitely tend to send a lot more news ones—hard news—so we don’t really use much in the way of emojis.

A mobile editor from a newspaper brand expressed concern that while he personally would be open to using emojis he didn’t think they would be well received among the publication’s older, more conservative subscriber-base. He suggested it would require a “perfect storm” for them to consider using them in an alert:

> For us, I would never say never to anything, but I think it doesn’t really fit the brand all that well . . . I mean, the median age of our subscribers is fifty-five years old, and they tend to be a little bit more conservative by nature. We get complaints when we don’t use “Mister” in a summary, so I think we’re a little bit away from emojis. There are definitely people in the team that are excited by the possibilities of it and would love to try it, and I’m open to experimenting on it, but it would have to be the perfect storm for us for it to work, really.

Another editor expressed a similar sentiment, suggesting that emojis were not a suitable fit for their brand, hypothesizing that it would probably take a story specifically about emojis for them to even consider using them in an alert: “We’re not really having conversations about [using emojis]. It doesn’t seem like something that people are interested in doing, at least not yet. I think I could see an example where we have a story about emojis, but otherwise it doesn’t seem like the right fit for our news brand.”

Elsewhere, people from other legacy outlets described the challenge of convincing those in senior positions that emojis would not alienate or upset their audience. A mobile editor from a major global news outlet described how they had dipped a toe into the water by testing emojis on Apple News, but had not yet “risked” using them in their main consumer app, partly due to nervousness and/or skepticism from senior management:
We actually do have the ability to do emoji—we just got that rolled out. But we have been very hesitant to use it yet for our consumer app. We actually just sent one to our Apple News channel. We felt like that was a safer test environment, with a slightly different audience. So we have sent one emoji in Apple News, and we have a style guide for when we should use them and how we should use them. My boss is also very skeptical of using emoji, but we suggested to him that if we are thinking about using one we’ll come up with the text of it and run it by him before we send it. I think he’s worried it will be too cutesy or whatever. We can do it. We will do it, one day!

**Handling Rich Notifications: Section Summary**

**Photos and video**

- Photos and video, still a relatively recent advancement in the world of push alerts, are used with varying levels of enthusiasm. Around two-fifths (forty-two percent) of the outlets in our study pushed at least one rich notification. Four attached a photo or video to almost all of their alerts (eighty-seven to 100 percent).
- Some newsrooms have started developing standards and workflows for handling rich notifications (e.g., getting editorial approval for photos attached to push alerts; not attaching photos to alerts about certain kinds of stories/events, such as terror attacks).
- Some newsrooms’ use of rich media is curtailed by clunky internal systems/tools (e.g., making it impossible to select the photo). This has caused some outlets to stop using rich media due to concerns about poor user experience.
- While many interviewees are enthusiastic about rich notifications, many are also wary and will only pursue them if they believe there will be worthwhile payoff around user engagement. There is concern among publishers that parts of their audiences are not aware that alerts can be expanded to reveal photos/videos.
- Some outlets openly state that rich notifications are not currently a priority. Others would like to implement them, and intend to do so, but have been hampered by development delays on their end.
- Rich notifications are a good example of an area where Apple/Google get to call the shots. As well as providing new opportunities, they also hinder publishers’ plans (e.g., some publishers have had to stop using photos or videos because they have not worked as expected).
Emojis

- Although only six of the apps in our study pushed alerts containing emojis (two of which did so extensively), publishers across the board are giving them an astonishing amount of thought.
- Brand is among the most important considerations for emoji use. Some outlets do not envision using emojis because they are not considered brand-appropriate; others believe they’re a good fit for their target audience and voice.
- There is an argument that emojis require as much craft as language.
- As with photos and video, some newsrooms have developed style guides and standards around emoji use (e.g., appropriateness, volume, positioning).

9. Metrics

Across our interviews, the range of metrics being monitored varied from newsroom to newsroom. The most commonly cited approach involved one or more of the following:

- Open rates
- Expansions
- Opt-outs (people turning off alerts)
- Session times
- Web traffic
- Unique users in app

Some interviewees said they actively monitor these analytics throughout the day (in at least one case, a live dashboard containing push analytics is available to the entire newsroom); others said they avoid this because it doesn’t provide a full enough picture of the alert’s lifespan. As one mobile editor from the latter camp put it, “We don’t pay too much attention to real-time traffic from push alerts because we realize that the impact might not be felt immediately—sometimes alerts are going to have a longer tail.”

Others, however, are so hamstrung by the limitations of their systems that they are effectively forced to take a more short-term approach. As one mobile editor described it, “We can only really tell in the hour, or looking at it in an overall daily perspective, how things are doing. We can’t really tell if we have more traffic because of an alert we sent the day before, for example. It sucks.”
Completing the loop, the frequency with which analytical data is collated, analyzed, and fed back to staff also varies. For some, it occurs daily. Others circulate a weekly report. In one case, it is a biannual occurrence. In some ways, the lack of any shared consensus around (a) which metrics to prioritize and strategize around; (b) the best tools to use (some use in-house tools, while others use third-party offerings from the likes Urban Airship, Google Analytics, Adobe/Omniture); and (c) the frequency with which data should be analyzed, fed back, and acted upon reflects a general feeling of uncertainty about—and dissatisfaction with—the current state of push-based analytics.

By far the most widely shared view across the entirety of our interviews was that metrics as they currently exist provide a very incomplete picture, leaving newsrooms to do their best in very trying circumstances. This shortage of useful analytics does not hinder practitioners’ ability to complete tasks on a practical level per se; however, many feel it severely hampers their ability to fully realize their goals. Asked about the biggest challenges faced with push alerts, one mobile editor immediately cited the lack of quality metrics, stressing her frustration about how this inhibits her team’s ability to fully understand the strengths and weaknesses of their strategy: “Analytics is a huge one. You can’t get past that,” she said. “You need to have more data to understand what you’re doing and to make the best choices. It doesn’t mean that you’re making bad choices, but [without it] you’re not making as good [a choice] as you could.”

The apparent lack of meaningful data about push alerts becomes all the more acute when compared with the multitude of analytics that newsrooms have become accustomed to using to inform other aspects of their digital operations. One digital editor said:

I struggle with metrics [on push alerts] because there really is no metric beside direct opens, yet we have so many different things with both our app and the web that we can look at scroll-downs, time on the page, opens, uniques, time of day. There are so many things that we can look at with a regular story that we cannot do with push.

Just as this response alludes to, the decision to focus on direct opens (which many do) is one that’s often made reluctantly. As was noted earlier, the absence of other meaningful analytics forces a default to this metric—the “vanity alert way of saying it was a success,” as one mobile editor memorably described it—despite strong reservations about its limitations and incompatibility with the desire to inform directly from the lock screen.

One mobile editor from an outlet that sends alerts on an almost hourly basis described how they monitor relative spikes in web traffic to try and inform their strategy:

We sort of do [use metrics] . . . We have an in-house tool and we can see, sort of, that when we send an alert we see a spike in traffic. That’s kind of what we see. So we do use
that to gauge, “That did well, that didn’t do well.” We kind of look more at what does well and can we emulate that because that’s the easiest thing to do. So we do that: “OK, we know that if we send an alert, we see that this one spiked at nine a.m.” They tend to do better than we might have expected them to do, so we’ll keep sending them. If we see that this alert at X hour isn’t doing that well, maybe we’ll send another alert during that hour to push up audience.

Some outlets are combining different metrics to try and hack together a more complete picture. One audience manager described how his team mainly focuses on a combination of open rates and opt-outs (people who disable notifications), although the latter can only be seen if it occurs inside their app—they have no way of knowing if the user has disabled alerts in the system settings of their phone. Another audience manager framed one of his outlet’s core metrics, page views, as a necessary, albeit limited, measure: “We’re quite early in our experimentation with [using metrics to inform strategy], so we’re using page views as a very basic one, for some rough benchmarking to see how notifications perform, and then we’re using attention time, which I think is crucial.”

For this person, the directness of push alerts makes attention time a particularly important metric, as it allows them to gauge how effectively they are judging their audience’s appetite for the stories they are pushing:

If you’re effectively interrupting somebody with a notification about a story that you think is important, have you managed to convey the importance of that to them? I think you can judge that quite well by attention time. So [we use] page views to see if this blunt tool that allows us to reach hundreds of thousands, if not millions, of people actually does succeed in bringing them to the story, then attention time to see what they do when they get there.

With greater emphasis placed on informing directly from the lock screen, the tide may be turning slightly in terms of how metrics are prioritized. One person, when discussing distributed content and tech platforms more generally, stressed the importance of recognizing how observing user behavior (as have Facebook, Instagram, et al.) has forced publishers to change their distribution strategies and expectations:

At the end of the day, our true and honest outcome is to really meet people where they are, which is on their lock screens, and obviously, since we can see if users are expanding a notification, for all intents and purposes, we count that as a click. It’s still [news outlet] branded, they’re still engaging with the [news outlet] product, and although it might not be clicks on our website, we do still see that internally and we’ll eventually use it externally.
for ads and whatnot. So it’s really just giving them a product that (a) they engage with and (b) that they really want and like.

Despite their limitations, metrics were also an area where numerous interviewees felt that a cultural shift was needed to convince parts of their newsrooms of their value. A mobile editor from a regional newspaper expressed frustration at her newsroom’s unwillingness to at least try and use analytics to inform and improve their strategy: “We aren’t really looking . . . It’s been three years and I’m still kind of wondering, ‘Why don’t we care about some of these things?’ It sort of feels like we’re throwing stuff out there, and seeing if it sticks, and then not paying attention to why it did or didn’t stick.”

**Metrics can’t measure what newsrooms want to know**

As noted previously, practitioners from outlets of all stripes often say that they want their alerts to offer value and that they’re crafted in such a way that the audience should not need to tap through to understand the key components of the story. Unfortunately, though, while clicks and expansions can be quantified (though not every newsroom has access to all of these metrics), it is not possible to measure value. Thus, a common complaint is that mobile teams can’t get feedback on one of their main objectives: whether or not recipients enjoy/appreciate the alerts they receive. On this subject, our interviewees said:

> I guess the bigger thing is, how do we measure successful alerts? Because we’re not sitting next to everyone as their phone goes off saying, “Now did you open that? Did you get everything you need to get without opening that? Did you appreciate getting it?”

*(Producer)*

> At a broad level I hope they’re happy they got it, or they found it to be valuable. That’s my number one goal—we can’t measure that—that’s a frustration of ours. We can’t measure whether people think something was valuable or useful or helpful, so what data do we look at?

*(Mobile editor)*

> We do not measure success based on how many people tap on the notification, but that’s not the be all and end all to me. The be all and end all to me is, did users find this useful or not?

*(Mobile editor)*
As these examples illustrate, there is widespread frustration about the difficulty of gauging qualitative aspects of success, such as helpfulness or usefulness—important factors that are not captured via quantitative analytics. Consequently, interested parties are left to second-guess their audiences and hack solutions together using the limited array of measurable (but not necessarily related) metrics available to them, including app-level opt-outs, etc.

At times, interviewees acknowledged the need for deeper, qualitative user research that goes beyond the data provided by quantitative analytics. Some are in the fortunate position of being in newsrooms with the resources and knowhow to put such work into action. One mobile editor said:

The main data points I’m looking at are opens and opt-outs. It’s a pretty incomplete picture. So one of the biggest challenges for us is to really get a sense of how people feel about what we’re doing. We’re going to do some research on that. We did one survey once, and we’ve talked about things like adding buttons on the push that allow the user to respond with, “This was helpful” or “This wasn’t.” I know Mic does that, so that might become one solution, or maybe we just make an effort to do more regular user research.

Others, however, are in a less privileged position, acknowledging the need for deeper research but knowing there is no appetite and/or resources to do it internally. As one producer put it, “It’s just sort of an impossible thing to measure without doing a really wide ranging survey, which we’re not going to do.”

The flaws of device-centric analytics

A common complaint about the metrics currently available is that, out of the box, they typically revolve around devices. Therefore, data about the number of engagements/opens/clicks an alert has solicited is weighted against the number of devices it was delivered to. Thus, under this system, devices that have been sitting unused in a drawer for a week count as much as those that are actively being utilized by a human being. Another pain point here is what was referred to as “vanity installs,” or users who install and opt-in to alerts from elite, subscription-based publishers for which they do not have a paid subscription. These vanity installs warp device-centric metrics because by increasing the number of devices to which alerts get delivered, they decrease the proportion of subscribers/engaged users that can be realistically expected to tap an alert to reach paywalled content. Consequently, the maximum achievable click-through rate decreases with every vanity install. This focus on opted-in devices—which could also include users who do not know (or care about) how to disable alerts or uninstall
unwanted apps—makes for an imperfect metric that does not create a useful picture of a news outlet’s engaged app audience.

One product manager spoke at length about the challenges this creates and the measures he has taken to try and address it. He explained that alerts being delivered to a large number of dormant devices invariably meant that direct open rates (number of devices that opened an alert divided by the number of devices it was delivered to) showed very little variability from one alert to the next, making it difficult for his team to draw any conclusions about the language (tone, style, etc.), content choices, and times to which their active audience best responds. His solution was to optimize around audience members that (a) had opted-in to push alerts and (b) had opened their app at least once during the previous eight weeks, which he considered a truer (albeit still imperfect) representation of their active audience and, by extension, the people they should be shaping their strategy around. Six months later they had increased their average open rate by twenty-one percent.

The ‘holy grail’ of user-based analytics

The same product manager made a particularly compelling case for why metrics need to become more user-centric than the device-based approach that currently prevails. The reason for this, he said, is that many people own multiple devices (e.g., a mobile phone and a tablet device) and will likely have their preferred news outlets’ apps installed and receiving push alerts on all of them. Therefore, an alert that is delivered to two devices may only reach one user. It stands to reason that people are extremely unlikely to open the same alert on multiple devices (not least because, once opened in one place, alerts are often removed from other synced devices). Thus, an alert that reaches a user on three devices (their personal iPhone, work Android device, and tablet, say) and is opened on one will record a thirty-three percent open-rate. However, it is arguably far more valuable to know that the alert achieved a 100 percent open-rate with the user than it is to know that it received thirty-three percent open-rate across that user’s devices. Extrapolating to a full news audience, he said:

   Once we are able to unite a given user account across multiple devices, we can say not [that] “This push was sent to five million devices, let’s see how many of them opened it”; we will be able to say, “This push was sent to three million readers, and let’s see how many of them tapped on it on any of their devices.”
Measuring the Success of the Same Push Alert: Device-Based Metrics vs User-Based Metrics

Device 1

Device 2

Device 3

User 1

Device-based metric
Alert opened on 1/3 devices
= 33% open rate

User-based metric
Alert opened by 1/1 users
= 100% open rate
Of course, it is no small task to unite user and device data and may currently require more resources than many outlets can justify, given the considerable work required to adapt and modernize preexisting databases, sync the various systems and tools, etc. For many, this is not a possibility. However, for those for whom it’s in reach, achieving this solution was described as “the holy grail.”

Even expensive, third-party solutions are limited

Metrics are also an area where, according to our interviews, third parties have so far missed the opportunity to fill the void. Reflecting on the limitations of her outlet’s in-house tool, one mobile editor said, “I’m sure maybe The Guardian or the Times have better in-house tools, but even third-party tools don’t seem to be that great.”

Many who are also reliant on third-party tools echoed this view. One person argued that their vendor’s metrics, which are geared toward retail apps, uses an indirect open rate based on users who launch the app within twelve hours of receiving an alert, as long as no other alerts are sent in the meantime. This is of minimal use to news organizations, which are likely to push multiple alerts per day. Other people wished that their alert-based analytics could be better integrated into their other systems. For example, one mobile editor complained, “[Third-party vendor’s] metrics are kind of shitty. I would love to be able to have it working with our existing system—we use parse.ly as our primary newsroom metrics, we have Chartbeat—but I would love to be able to make push more part of our regular suite of analytics tool.” Elsewhere, another mobile editor noted that their analytics categorize app traffic from push alerts as “dark social” (when people share content through private channels such as messaging apps, email, etc.), making it impossible for them to separate and analyze push data.

The shortage of useful analytics is not a problem that news organizations or third-party vendors can entirely fix by themselves. They are at the mercy of Apple and Google to build the necessary functionality into their mobile operating systems and share that data back.2 Multiple people complained that the data available from both Apple and Google is too limited.

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2 Theoretically at least, facial recognition technology that is starting to become popularized has the potential to provide answers to one of the biggest question publishers have about their alerts: whether they have been seen on the lock screen. With alerts only being displayed when the registered user’s face is recognized by the device, this viewing data could presumably be collected. Whether it is or not, and whether it gets shared back to the publishers, remains to be seen.
Some business models mean metrics are not important

As a final point, it should be acknowledged that metrics are of less significance to some outlets by virtue of their business models. For example, a mobile editor from a news agency said that metrics don’t have “a huge influence over push notification decisions” because his outlet’s “very news value-based” alerts focus on breaking news and exclusives. These, he said, are “scenarios where it can be very hard to get useful information” because they are “just looking to get it [the alert] out,” as opposed to “follow[ing] trends.” Unsurprisingly, these interviewees were among the only ones who did not express some kind of frustration with the state of push analytics.

Metrics: Section Summary

- Whether they are gathered in-house or via third parties, metrics/analytics for push alerts as they currently exist are extremely lacking. Regardless of which they use (or combinations thereof), practitioners generally report that their analytics paint a very incomplete picture, making it difficult for them to grasp where they are doing well and where they could improve.

- The growing consensus about informing directly from the lock screen highlights one of publishers’ biggest gripes about metrics: that they currently have no way of telling if alerts have been seen. Consequently, many reluctantly find themselves focusing on open rates, despite their flaws. This is also beginning to impact how some outlets prioritize metrics, with some effectively treating expansions (expanding alerts via 3D Touch or its equivalent) as “the new open.”

- Metrics don’t/can’t tell practitioners one of the main things they want to know: whether their alerts are useful/valuable. Many people acknowledged the need for qualitative research into this. Some are in the fortunate position of having in-house research teams to help answer this question; others are not and will be left in the dark.

- The device-centric approach to overall analytics is flawed, leading some to hack together alternatives (e.g., weighted open rates that attempt to discount dormant devices). Some consider user-based analytics the “holy grail.” Despite its cost and complexity, it’s a goal some organizations are actively working toward.

- Metrics are an area where publishers are partly at the mercy of Apple/Google, and their willingness to share relevant data.
10. Challenges

The rise of push alerts, combined with the speed of technical innovation, has created a number of new challenges for news outlets, many of whom are still finding their feet in this area. Looking beyond the most general challenge, which is standing out on a crowded lock screen, the major issues interviewees described fit broadly into three groups:

- Newsroom
- Audience
- Product and tools

(Note that issues relating to metrics and the difficulties of measuring success have been covered in earlier sections and will not be repeated here.)

Newsroom

Many interviewees described a strong desire to see changes in newsroom culture and/or at the organization level to make them more push-orientated. For some, this was born out of a desire to future-proof; others felt that change is required to counter existing problems.

Creating a shared vision that covers the entire organization

In some cases, a lack of understanding about push alerts or strategy goes all the way to the top. A number of interviewees described difficulties in getting their bosses and/or colleagues in different departments to fully embrace their push strategies, and, in particular, understand the need for a nuanced outlook that reaches beyond base metrics such as speed and open rates. A mobile manager described this as one of his foremost challenges, saying:

"I think one of my big struggles with push is articulating to my bosses and making them think of success the same way that I do, and making them think of pushes the same way that I do. Speed is a big thing in that [while] I do think it matters . . . I don’t think it matters as much as some people do, and I would like to get people on board with that."

Given the lack of meaningful analytics, many people described frustrations at the disproportionate value placed on clicks/opens by senior management, which at times led to unwelcome pressure to alter strategy in pursuit of more big “hits.” One mobile editor gave a particularly honest appraisal of the tensions that can arise when other departments do not buy
into the outlet’s core push alerts strategy and instead hone in on this one-dimensional view of success:

I’m not necessarily 100 percent in agreement with my business-side counterparts. For them, they get really excited when they just see lots of big numbers and don’t necessarily understand the nuance between: Are we serving our readers with just that push alert? And I think they would definitely like to see us send more push alerts. But I’m really focused on: are we serving our readers what they need to know, when they need to know it, and making sure we’re not annoying them?

This person provided an example of how this lack of a shared vision, combined with incompatible perceptions of success, had resulted in internal pressure to adapt their strategy to try and replicate the success of other alerts:

There is [pressure to pursue more big numbers]. We had a recent increase in interest in push alerts because some recent alerts did so well—they did too well, if that makes sense—that they attracted too much attention. So people starting saying, you know, “What you did that day really worked, let’s do more of that.” But it depends on what the news is! That was huge breaking news and we sent that push alert to every single user of the app, regardless of region, so naturally it’s going to do better. We just simply do not have that kind of news every day to send those alerts.

Such conflicts are far from exclusive to push alerts, of course. People across any news organization have varying objectives and are judged against different criteria. But for people who work with push alerts on a day-to-day basis, the focus tends to be on audience and journalistic value rather than business or brand, and it can be challenging to achieve consensus on this. One audience manager admitted that “getting everyone aligned on a real user-focused strategy can sometimes be difficult because there seem to be other business goals or brand goals that people want to use push for. So that mentality, that mindset, is the biggest challenge that we have to work against.”

Likewise, another audience manager immediately cited teamwork as his biggest challenge, adding, “Having the opinions of those three people—the news editor, the production editor, and the audience editor—respected and listened to, I think that’s key.” For him, the lack of teamwork and cohesion around a shared vision can hinder his team’s quest to achieve a successful, user-based strategy when other colleagues are (a) overly reliant on “a hunch” about the audience or the value of a piece of news; (b) “less data-driven” than those who work with push alerts all day (i.e., perhaps not understanding the available data, respecting its values/insights, or agreeing with how it is interpreted); and (c) “not . . . willing to admit when something goes wrong.” He
added that there was a need to constantly re-evaluate and evolve their approach, rather blindly sticking to the same, seemingly unsuccessful, formula. “If push notification stories about Brexit are not being read by readers in the U.S., we need to re-frame them or stop doing them. We mustn’t just continue to do them, and I think persuading people towards change when they’re adamant that they’re right is a really tough thing to do,” he said.

Making push alerts more central to wider newsroom culture and practices

An overwhelming majority of interviewees expressed a desire for a broader cross-section of their newsroom to get involved (or, at the very least, take an interest) in push alerts. As things currently stand, most people described a relatively small circle of people that take responsibility for their outlet’s alerts—and many felt that these small groups were the only ones giving concerted thought to push.

This is an area where many interviewees would like to see improvements, not least because there is an obvious argument that broader input from a larger pool of experts can improve the overall quality of the outlet’s push alerts. For some, this means increasing awareness of the outlet’s push strategy and the capabilities they have at their fingertips—an area where many recognized they themselves could do more to educate and integrate their colleagues. As one mobile editor described it:

> Just integrating push into the rhythms of the newsroom is still something we’re working on. Certainly there are people who know how to write great push who are on the metro desk or something and who will pitch to us. But there’s other editors out there who are less familiar with that and may not really know that we have the geo-targeting capabilities, so they don’t even think to flag something for us. [So the challenge is] just sort of educating people on our strategy.

Another mobile editor echoed this call for increased input from the people most intimately involved in producing the stories being pushed:

> I would like more people to suggest language, especially as we do more alerts that are more wide-ranging and not just on breaking news. To have more buy-in from the newsroom, to have the people closest to the story—the writer and the editor, they know the story best, they’re dealing with one to three stories a day—suggesting language, I think would be extremely helpful for us.
Changes in push strategy can necessitate changes in newsroom workflows

To implement the changes required to facilitate wider participation in push alerts, existing workflows would have to be tweaked or new ones developed. This is not necessarily a smooth process, nor is it likely to be entirely well received by those affected. One social media editor noted, “Workflow is an interesting challenge because, whenever you’re altering workflow around the moment that news breaks, it’s a challenging prospect to do that well and so it requires a little bit of patience to get that right.”

A mobile editor from a legacy, regional newspaper went further, arguing that trying to implement change to keep pace with industry advancements was the biggest hurdle she had faced. “It sort of feels like once we’ve done the training in something, that’s our policy. Even if it’s five years later we’re still going to do it that way because, at one point, that’s how everyone was trained to do it,” she said.

In the absence of clear systems, workflows, or strategy around push alerts, the only way to provide the evidence required to support change was via quantitative analytics. “You have to have these numbers to support making a pretty seismic change and sometimes that’s hard for me to do, especially when our alerts are a sort of tragedy of the commons,” the same mobile editor said. “So we’re sort of all responsible for the success of it and no one is responsible for the failure, so we’ll just keep focusing on successes.”

While this particular situation may be specific to one individual and her outlet, the vicious cycle alluded to and the lack of meaningful analytics certainly isn’t. Metrics are required to persuade people to change their policy/strategy/workflow around push alerts, but those same metrics are notoriously limited. The most accessible one, and in some cases the only one people can fully grasp or appreciate, is open rates, a measure that many do not consider a suitably nuanced gauge of the value push alerts bring to the audience. To the unininitiated, underwhelming open rates can create the impression that push alerts are not valuable or worthwhile, thus meaning that change can be slow, or nonexistent.

For others, the requirements of push alerts—the crafting of language and the selection of rich media or emojis—are sufficiently different from other aspects of news production that they warrant workflows of their own, or possibly even dedicated staff. Some larger newsrooms are in the fortunate position to have a core of staff able to dedicate a sizable proportion of their time to push alerts (one interviewee was about to hire a notifications editor to focus on push alerts, experimentation, A/B testing, etc.). More generally, there was a shared belief that newsrooms could do more to re/organize around the specific demands of push:
For me personally, I think that we should probably be creating a team that’s just focused on this [push alerts], and so I think the challenge is sort of: How do you balance the breaking news workflow with the need to potentially treat mobile phone users differently, to speak to them differently, to craft language differently? I think the challenge for me is: how do you convince the newsroom that you should do that—to separate the team to focus just on these types of users, because the tool is really about serving breaking news needs, and I think the breaking news needs on Twitter are different to the breaking news on your lock screen, and I think we should be staffing and organizing ourselves differently.

Indeed, this person was far from alone in making the case for having staff dedicated to push alerts. This was a recurring theme, particularly among those based at larger institutions. As one mobile editor put it, “In an ideal world, I would have a team of people devoted to push twenty-four hours a day, seven days a week, crafting language, doing experiments and looking at the results. We’re nowhere near there right now, and in a world of shrinking resources, does that really make sense?”

Maintaining consistency across distributed newsrooms

Some journalists from larger, multi-national newsrooms described the challenges of ensuring that the style and tone of their alerts remain consistent from one newsroom to the next. A mobile editor described this as one of the bigger hurdles their organization has faced in recent times:

I would say in the past year-and-a-half or so one of the bigger challenges we faced was consistency in our alerts. We’re a global, 24/7 news organization and we have editors here, in London, in Hong Kong, and we hand off responsibility for push alerts just as we hand off responsibility for the homepages. So we’re trying to get everybody on the same page of, “OK, we’re no longer writing our push alerts in headline style now. They should be sentence-case, and please be serious and appropriate,” but getting all of these people, which is probably a total of twenty to twenty-five people, to all be in the same place, and understand that, that was a big challenge.

Similarly, when describing the collaborative effort that goes into preparing the language of an alert, one audience manager noted that the openness of their digital forum—a dedicated Slack channel—can elongate the process of formulating and sending an alert. This can be particularly problematic in time-sensitive, breaking news situations:
We have a Slack channel where we exchange ideas back and forth . . . That Slack channel is open to all of the production team, so subeditors and production editors, everybody on the audience team, and also news editors. But this is where it starts to get a bit messy in terms of the hygiene of communication because, ideally, we’d only have the three people who are on duty at the time drafting the language, but the openness of the channel means that people in other offices—say, on the West Coast, for example—can start to weigh in, and often that’s helpful, but in a breaking news situation that can become quite irritating.

In the absence of a stringent style guide, different personal preferences among individual staff members can result in an inconsistent style. For example, one mobile editor described two alerts that had been sent via her outlet’s app and argued that idiosyncrasies in her team members’ emoji preferences impacted the overall style and tone:

Personally, I think they had too many emojis. The same person wrote those two and he likes to use more emojis, so it depends who’s writing the alert. He really likes emojis, so he sends more. I think maybe I like less, so I send less. Some people don’t send any, or they just put one in. So it really does depend—I guess it’s like an emoji style.

An editor from a regional publisher outlined how inconsistency can arise when different people take control of pushing out alerts, adding, “It really varies from shift to shift.” Consequently, her team’s focus on regionally specific news alerts tends to loosen in the evening, creating an inconsistent style for the brand and an increased willingness to alert to events that don’t achieve great pickup among their app audience:

The night crew is much more willing to alert the national news for whatever reason. I think that might just be because they don’t have as much local news coming in, so they think, “Oh, well this is what’s happening, we have to alert this,” and we just haven’t seen great results with that. We’re just struggling to figure out where exactly we fall for readers, because obviously we are the go-to source for [city] news; for many, statewide news; and for some people, Midwest news.

**Systems, tools, and workflows**

Many people cited the tools they use for publishing push alerts as a hindrance, frequently assuming that other newsrooms enjoyed the luxury of better alternatives. However, with very few exceptions, interviewees expressed almost universally a need for improved tools, with many saying the current ones limit the scope of their work. One audience manager said, “The tools are
hard to use. They’re cumbersome, they’re kind of tedious, so that probably puts a little bit of a chilling effect on us doing more and takes up time we could be using elsewhere.”

Another digital editor made the case for separating push alerts from other updates, arguing that bundling them together into a “tool [that] is really about serving breaking news needs” in the name of simplicity and speed was detrimental to their push alerts:

We’re limited by the tool that we use because, for breaking news at least, we use the same tool to send out the push alerts as we do to send the tweet and to put the banner on the homepage, so it’s all wrapped up together in one tool. I think in certain cases we do the push alert a disservice because we’re trying to meet other needs with the same tool.

This points to a broader issue about workflows and priorities, returning to the question of whether push alerts should be treated as a unique piece of content in their own right in terms of tools, workflows, and staffing. The same editor said that while they already have the systems required to separate push alerts from other outputs (i.e., tweets, homepage banner, etc.), their newsroom workflow is currently geared toward speed and simplicity. This means that the same text is sent to every platform via an in-house tool, to the detriment of the push alert:

We use Urban Airship, but we use the editor’s interface with the tool, which is built in-house. They’re basically typing the text into a text [field] and hitting send, and when they hit send, it sends it to Twitter, it puts the banner up on the homepage, and it sends a push alert. So it’s basically sending a packet of information to Urban Airship and then it gets sent out. We totally have the capability of just using Urban Airship to send our push alerts, but the way our newsroom workflow is structured, that’s not how we’re operating currently. But I think it’s a possible way we’ll do it in the future. I think it’s just conversations of: How do you try to meet all of these different needs when it’s a breaking news situation? How do you meet all of these needs quickly? So right now the most efficient way is through this tool.

Elsewhere, some people find they are constrained by their outlets’ lack of interest in mobile. This was a sentiment expressed by multiple interviewees, albeit to different degrees. At the most extreme end of the scale, a mobile editor said, “Mobile is definitely on the back-burner for [my news outlet]. It’s not anybody’s main focus, really . . . Most people on the team don’t put too much thought into mobile.” For people in this position, they are forced to do their best with the tools at their disposal, with no clear vision of when they will have access to the more advanced, contemporary resources enjoyed by some of their peers.
Notifying breaking stories before the story is available

When an unexpected news story first breaks, many outlets will try to push an alert as quickly as possible. However, attempting to do so before an associated article has been produced can create complications.

One front-page editor expressed frustration that the absence of a news ticker on their app’s landing page meant they could not even post a breaking news alert and link to their homepage as a temporary destination. Instead, they have to wait for a story to be written, costing valuable time while their competitors are pushing alerts out to their audiences. “I think because we have to wait for an entry for a breaking news alert, that means we’re usually much slower than the other apps out there,” she said, although she did note that a positive consequence of this was that it forced them to think more deeply about follow-up alerts and coverage.

A mobile editor and product manager from a news agency that places strong emphasis on breaking news also noted that their app users do not always realize their alerts about breaking stories will not necessarily have an article attached, which can be a source of frustration for parts of their audience.

Another mobile editor related an entertaining anecdote about his own experience with his outlet’s approach to handling alerts that do not have an article attached:

In our app, when you push a push notification and there’s no article attached to it, it opens the last article you had open in the app, and that was kind of a terrible experience. I have a personal example where there was a terrorist attack and I tapped on the alert and the last thing I’d read was an article about how yoga pants can become too smelly. So it was just super embarrassing, and I said, “I can only imagine if this was a subscriber.”

This led to a more serious point around evidence from internal analytics that showed, for the mobile editor’s app, alerts that didn’t have a destination frequently resulted in users disabling push notifications. This finding, he explained, had been the stimulus for a change in strategy around breaking news alerts for which there is not yet a complete story:

We went through the data and we found that there was a strong correlation between push alerts that had people turn off push notifications shortly after receiving the alert and an alert that had nothing attached to it. So basically now every time we send out an alert we have something that’s attached, even if it’s just a sentence, or a paragraph, or even just a collection of headlines in an article; everything has something attached to it. We’ve seen the number of turn-offs decline substantially since we did that.
Being conscious of cultural/regional nuances in audience attitudes

Many interviewees stressed the importance of not treating the audience as a monolithic entity, and of recognizing that even if a shift in alert strategy is broadly embraced in one location, that success may not necessarily be replicated elsewhere. This, of course, is particularly important for organizations whose apps are widely used across multiple countries. For instance, one audience manager described how a tweak in strategy received tangibly different responses among audiences in the United Kingdom and the United States:

In the U.S., we’ve been experimenting with pushing to . . . feature pieces [as well as breaking news]. My colleagues in the U.K. tried that recently, and they sent a push notification to a feature and got a flurry of emails from people saying, “Why are you alerting this? I signed up for breaking news, I don’t want features.” So I think there is quite a fine line to tread there. Perhaps people in the U.S. are more accustomed to receiving that mix of notifications because so many news organizations have gone in that direction and forcefully educated people about what to receive.

Segmenting users

Segmenting users was identified as one of the biggest strengths for outlets that can do it, and one of the biggest desires for those that can’t (see section titled “How News Outlets Decide What to Push”). Either way, though, practitioners are cognizant that it is far from a silver-bullet solution to their problems. One mobile editor who is not currently able to segment her audience said:

The bigger challenge now is getting to the next level with being able to segment users, whether it’s by region, by interest, whether it’s them [audience members] explicitly telling us what they’re interested in, or us implicitly assuming, “Oh, you’re interested in tech news because you read a story about Apple in the past month,” and being able to target alerts around that. But then what will happen is, once we get some kind of tool like that, which we are going to talk to vendors about, then we’re going to have to increase our efforts to pay attention to all of those different segments to say, “Oh, well this push alert would be really relevant to people who are in Los Angeles right now,” or “This is a really great alert who is interested in tech but not necessarily for all of our users.” So we will have to make sure we’re paying attention to all of those.

Indeed, personalization could create as many problems as it solves. Many interviewees see a future where users will be able to fine-tune personalized alerts down to the most minute areas of interest. However, this raises new questions. First, once users have opted into personalized alerts via topics/channels/writers, etc., how do news outlets strike the balance between active
personalization (done by the user) and passive personalization (where editors infer interest based on users’ prior behavior)? How do those things play together? Where is the middle ground? As one mobile editor put it, “Once we allow people to sign up for notifications about hot dogs, do we still send out a notification about hot dogs based on the fact that [people have] read some food stories?”

Second, the systems and workflows for delivery require considerable thought and development on multiple levels. Most news outlets currently create highly crafted alerts for a tiny proportion of their output, typically steering clear of standalone headlines. If and when it becomes possible for users to opt-in to receive alerts as soon as an article about any topic of interest is published (the vast majority of which wouldn’t currently have pre-prepared alert language), how do you go about producing alert language that doesn’t sound robotic and/or isn’t just a headline?

Any degree of automation becomes potentially problematic because, in theory, if publishers want to steer clear of the kind of robotic language and/or headlines they currently avoid, they will have to develop systems and workflows for writing alert language for every article they publish (at least until AI is able to write alert language fitted to an outlet’s preferred style). The same editor cited above imagined a scenario where the preparation of notification language was built into the editing process in order to “power a more personalized system where you’ve opted-in to notifications on this as soon as this article publishes.” But developing this workflow would be highly challenging, he added, and would require buy-in and cooperation from across the newsroom so “it doesn’t all have to go through this small group of editors on the news desk,” as is currently the case.

**Educating the audience about push functionality**

As discussed earlier, it’s relatively surprising how few of the publishers in our sample are making use of rich media in their expanded notifications (see section titled “How News Outlets Use Push Alerts”). One obvious, and oft-cited, reason for this is the development resources required to implement such functionality (time, money, availability, priorities, etc.). However, a considerable number of people also speculated that there may be a general lack of awareness among the audience that alerts can be expanded. If this is the case, then it follows that publishers will not dedicate valuable resources to developing and incorporating this functionality into their products if it is not going to be viewed or deliver any kind of return.

The jury is out on who should take responsibility for improving awareness about expandable alerts. One product manager spoke anecdotally about the number of tech-savvy people she had encountered who were oblivious that alerts could be expanded, and argued that “part of that [education] needs to be on Apple to make more people more aware of that feature.” That being
said, some publishers have started taking this into their own hands. For example, some Dallas News alerts contain the text, “Tap or slide for details,” explicitly telling users how to access the full story in their app. Elsewhere, when Mic’s app is launched for the first time, a tutorial video automatically plays, providing instructions about how to sign up for alert channels and how to expand them in the lock screen.

**An Alert Providing Guidance on How to Access a Related Story**

![Image of an alert providing guidance on how to access related content.](image1)

**Launch Video in the Mic App Showing Users How to Expand Alerts and View News in the Lock Screen**

![Image showing instructions on enabling notifications and watching the news in the lock screen.](image2)

Either way, the benefits of educating audiences about expanded alerts extend beyond visibility of rich media; it could also improve the depth of publishers’ metrics. One product manager,
lamenting the inability to know if alerts have been viewed on the lock screen (“I mean, I don’t
know how you would ever do this”3), noted that they are able to tell if alerts have been viewed in
expanded mode. Therefore, if, in an ideal scenario, users got into the habit of expanding alerts,
publishers would be able to get a better grasp of how frequently audiences are engaging with
their alerts. “If everyone viewed every alert in expanded mode, then we would be able to actually
know users are looking at their alerts. This is the success of these alerts. I think that would be a
great thing to know,” she said.

Issues with dayparting

Dayparting, or the practice of dividing a day for programming or push alerts, carries with it a
number of recurrent issues:

- Identifying the best time to send a dayparting alert
- Handling different time zones
- The lack of meaningful metrics to inform decisions about dayparting
- A/B testing, where available, can be inconclusive to the point of being useless

For many, the timing of dayparting alerts often boils down to (educated) guesswork and
journalistic instinct. Describing dayparting alerts sent via Apple News, one mobile editor said they
“almost always wait until about six o’clock,” but conceded that “to some extent that’s kind of an
arbitrary time.”

A product manager outlined her attempts to pull together different metrics to try and form a fuller
picture about when to daypart, before admitting, “I think that’s trial and error.” For her, the
incomplete state of metrics as they currently stand makes her just as likely to rely on traditional
judgment. She added:

> You can look at open rates . . . and just typical trends, “Oh, people are much more likely to
maybe open alerts received in the afternoon, or maybe when they’re commuting,” I don’t
know, and you can gauge from there, “OK, app sessions opened from alerts at these
times have longer time spent.” Some of it is based on these new things [metrics], but it
just goes back to before alerts existed, like: When are people in moments where they’re
not in social situations and would maybe want to be reading? It could be commuting,
either to or from work. It could be lunchtime, when people are walking out for a break.
Saturday mornings, things like that.

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3 Facial recognition technology of the variety emerging in 2017 may eventually help solve this problem,
depending on the extent to which Apple and Google (a) collect data about alerts that have been “seen” on
their mobile operating systems and (b) make this data available to developers.
Even if publishers feel they have a reasonable handle on a broadly successful time to push dayparting alerts, many still face the frustrating hurdle of time zones. This was one of the most commonly cited annoyances across our interviews. One mobile editor said that while they can currently target five regions, they can’t handle different time zones and will not be able to until geo-targeting becomes available:

If it’s something that we’re scheduling or sending at an editors’ discretion, we’ll wait for a lunchtime or maybe more like an evening commute time. But that’s still a really wide timeframe because lunchtime here [on the East Coast] might be breakfast on the West Coast. That’s a struggle and something we would like to be able to change—to make [the scheduling] actually be based on the user’s more specific location, so we can send a timely alert.

Another mobile manager agreed that it is “tough” handling different time zones, saying his outlet often tends to delay morning pushes in order to reach their West Coast audience, even though this may limit engagement on the East Coast where “a lot of people are already at work.”

The manager said he would like to research whether there “really is an optimal time” to push an alert, though added that there are a range of problems that make A/B testing particularly challenging. First, “externalities” can get in the way, such as breaking news occurring on or near the time you want to send a test alert. (Most outlets are loath to send different alerts in quick succession.) Second, there is the million-dollar question discussed earlier: what—if anything—is the appropriate measure of success?

Could journalists do more to try and relate to their audiences?

Finally, as touched upon in the section on speed, a number of interviewees mentioned a need to try and better relate to their audience. This typically came up in the context of newsrooms becoming too preoccupied with things that are of more significance to them than their audience (e.g., speed, beating a rival to a scoop). The risk, they said, was that they lose sight of the things that matter to their audiences, risking a disconnect.

As one mobile editor put it:

I think another thing that journalists forget is that most people don’t have seven or eight or ten or fifteen news apps, and aren’t getting the volume . . . of push alerts that we [journalists] probably all get. They probably have maybe two or three of their main news apps. I think we assume a lot of our readers have The New York Times’s app, but we don’t know, we can’t know what other news apps they’re reading . . . I think we should do a
better job of just thinking about what our news push experience is . . . but it’s hard not to think about also [being] compared to the other ones that people are getting!

This is another area where regular audience research could be of value to news outlets, helping them to implement and maintain a stronger, more user-based approach to their work.

Challenges: Section Summary

- At the most general level, some outlets are particularly concerned about how to stand out on increasingly crowded lock screens.
- Many practitioners feel cultural change is required in the newsroom to achieve a shared vision that embodies the nuance of push alerts and does not place disproportionate focus on base metrics such as speed or open rates. At present, some people are occasionally placed under undue pressure to win the race to alert first or replicate high open rates achieved with previous alerts.
- There is a desire to see push alerts become more central to newsroom culture. Practitioners involved in push alerts would like to see colleagues get involved in the process, by suggesting language, etc. This is an area where they recognize they could and should do more to integrate colleagues into the process, and make them more aware of push strategies and the capabilities already available.
- Integrating push alerts can necessitate that existing workflows adapt or new ones are developed—something that can be met with resistance in newsrooms. Persuading management of the need for change often comes down to metrics, which are notoriously limited and do not necessarily gauge the value that push alerts bring to audiences.
- Catering to the mobile audience, a process pivotal to push alerts, is arguably so distinct from other aspects of news production that it is worthy of dedicated staffing and re/organization.
- News outlets have had to take measures to ensure consistency (a) across distributed newsrooms (ensuring those responsible for push alerts are on the same page regardless of location); (b) from shift-to-shift (day team versus night team); and (c) within the same team (policies on style, tone, etc.).
- For many, the tools currently used for push alerts don’t feel up to scratch. In some cases, this is because they have been bundled together with other outputs focused on breaking news (e.g., push alerts synchronized with social media posts and updates to the website banner), in disservice to the push alert. This adds further fuel to the argument that they are best treated as a distinct piece of content in terms of tools and workflow.
• Push alerts without a destination can be a turn-off for audiences, leading some to disable them entirely. Some newsrooms have taken measures to tackle this by ensuring that a link goes to a temporary holding page or a landing page with a breaking news banner.

• Audiences are not monolithic; a change in push strategy that is welcomed in one location may not necessarily play well in others. Evidence of culturally/nationally specific idiosyncrasies further strengthens the case for more sophisticated audience segmenting.

• Segmenting may create as many new challenges as it alleviates old ones. Practitioners have to weigh the correct balance between active and passive personalization. For audiences to receive alerts about anything/everything an outlet publishes, a considerable amount of work will be required to execute the workflows that ensure alert language is crafted for, and attached to, every piece of content and/or develop the systems that can automate this process while retaining the voice of the organization.

• There may be a need to educate audiences about the possibilities of push alerts (expanding alerts, viewing video inside alerts, etc.), otherwise at least part of the work news outlets are doing is not being realized. Not only should this improve the user experience, it will also improve the depth of the metrics news outlets get back about their audiences.

• Dayparting remains a tricky challenge and is often dependent on educated guesswork. A/B testing in this area is fraught with difficulties, and outcomes can be difficult to interpret with any degree of clarity.

11. Conclusion

On the surface, push alerts look very straightforward. But the depth of thought being given to the broad range of challenges and dilemmas outlined by people interviewed for this report suggest they are something of a jigsaw puzzle. For news outlets seeking to establish a successful alert strategy, there are multiple pieces of that puzzle to try and fit together. To do so, they need to:

• Assign personnel who understand the role and function of push alerts, and foster a culture where their voices are heard and respected

• Implement training and management that ensures a consistent voice for their alerts, regardless of who is pushing them or their location

• Identify (or develop) tools and workflows that enable their push strategies to be executed as seamlessly as possible

• Create buy-in and cohesion across the organization, from the top down, whether it’s people in the boardroom accepting that serving the audience takes precedence over big
numbers, or people elsewhere in the newsroom getting involved in the process of crafting language
- Understand the audiences they serve
- Identify and prioritize the metrics that inform the best possible strategy and communicate them to interested parties elsewhere in the newsroom

At present, many outlets already have multiple pieces in place, but few seem to have them all. Perhaps the most pressing of these issues is the need for news outlets to understand their audiences. It’s a trite point, but all of the objectives they covet—brand loyalty, big numbers, high engagement—can only stem from a satisfied audience. Failure to develop an informed, user-based approach may lead toward a failed alerts strategy.

This is not, however, a straightforward task. As an overwhelming majority of interviewees made clear, analytics as they currently exist are a long way short of helping publishers understand their audiences. While audience teams are finding highly intuitive ways to hack different metrics together to create a fuller picture, this is an arduous task and can still leave a number of unanswered questions. It reduces the degree of (educated) guesswork that goes into their alert strategies, but it doesn’t come close to alleviating it.

The range and depth of metrics will surely improve—emerging facial recognition technology in smart phones will be able to determine when people have looked at an alert, for example. (Whether that data is made available to developers is a different matter, of course.) But analytics alone will not be enough. Time and again interviewees told us that they have no way of understanding what they care most about: how their audience feels about the push alerts they receive. For many, this is the only way to judge success. However, it can’t be quantified or automated. It can only be fully addressed through qualitative research, a point recognized by a few interviewees who intend to explore this question with their internal research teams.

Segmentation and personalization are key parts of push alerts’ immediate future, but this too brings a new raft of challenges and dilemmas. There is also the question of how far each should go. Increased personalization, which, taken to its extreme, would see audiences blocking out all but the news they want, arguably pushes the pendulum of power from news outlet to news consumer, raising worthwhile question around filter bubbles. As one audience manager acknowledged:

At the moment we’re in a very fortunate position where if you think a story is incredibly valuable and everybody must know about it, you can tell them about it. But the more personalized notifications become, the more you’re running the risk of getting into a filter bubble within an area where we once had a fair bit of control.
Right now there seems to be surprisingly little appetite for rich media alerts, either because news outlets are concentrating on nailing the basics of language, style, tone, and volume, or because their systems/tools and/or consumer apps are not up to speed.

As technology advances and newsrooms become more confident that they mastered the basics of their alerts, we will inevitably see an uptick in the number taking advantage of video, live updates, live streaming from within alerts, and whatever other opportunities the future holds. With this in mind, it is worth acknowledging that push alerts—once so uniform—look set to become another area where larger, better-resourced news organizations will have far greater scope to adapt, experiment, and advance than their smaller counterparts. They will have both the financial and human resources to implement product changes and updates, and take advantage of the new opportunities created by Apple, Google, and others. As has been evidenced in this report, even if advancements are made externally and opened up for “free,” the cost of implementing (design, development time, expenses, etc.) and servicing them (content) can still be inhibiting for some.

A well-implemented alert strategy offers opportunities aplenty for all parties. For publishers, they offer the prospect of building and cementing tighter relationships with their audience, which, crucially, takes place on their own turf away from Facebook et al. Some also see new opportunities to generate revenue through advertising, although the jury is very much out on how this will play out with audiences. For news consumers, they offer the opportunity to have a steady stream of content surfaced directly to them, increasingly on their terms, it seems. And for third parties, there’s an obvious void to fill around the frequent gripes we heard about the tools through which alerts are created and measured.

Despite this enthusiasm and the fact that app-based push alerts are an area where publishers currently enjoy a greater degree of control and autonomy away from the other social platforms that have taken a stranglehold on journalism distribution, there is no escaping that publishers are still beholden to powerful tech companies such as Apple and Google. As developers of the two dominant mobile operating systems, iOS and Android, these companies hold the strongest cards; if they introduce new functionality, publishers need to find the resources to implement it to keep pace with their peers; if they change/remove/break existing functionality, publishers are left to find workarounds. They also control if/how certain analytics are collected and shared. Compared to compromises made in other areas of the contemporary news ecosystem, this is a rather minor inconvenience. Many are hoping to resist a situation in which alerts become the next thing companies like Facebook swallow up. “We’re going to start getting [more alerts] from social media platforms as opposed to directly from a source,” one person from a digital native said, a process Twitter has already started.
That being said, there may still be lessons available to publishers from the way the industry relinquished so much power and control to Facebook et al. Many will be watching emerging trends around push alerts with interest. If the desire to inform from the lock screen takes holds, and audiences become accustomed to being informed/entertained there—that is, they become used to publishers providing content to be consumed outside of their own apps, as per Mic’s current approach—then publishers may run the risk of effectively providing content for (and therefore relinquishing a significant amount of power and control to) Apple/Google.

As for future research, there are numerous areas to investigate. The first, and most obvious, involves qualitative audience research. What do news audiences most value from a push alert? How much do they care about the speed at which news reaches them via push? What level of customization do they desire, and how willing are they to fine-tune their news apps to achieve it? What value, if any, do they feel photos and videos bring to push alerts? Any news outlets that would be interested in collaborating on this are strongly encouraged to make contact. Second, there are clear opportunities to take a deep dive into how local newsrooms are using push alerts. This research has started to scratch the surface, but there is clearly more work than can be done in this area. Additionally, the lack of consensus around (and general dissatisfaction with) metrics, and the ongoing difficulties caused by tools and content management systems, are issues worthy of closer examination.

This report began with a reminder that, by smartphone standards, mobile push alerts are deceptively long in the tooth. As we have seen, there have been, and continue to be, growing pains. But those working with them are upbeat about the future of push. As they race toward their tenth birthday, it feels like we’re just getting started.
Appendix: A Beginner’s Guide to Emojis in Push Alerts

As noted in the section on rich notifications, interviewees had a lot to say about emojis. Not everything discussed was entirely relevant to the main part of this report, but a number of useful points were made around best practices (e.g., when emojis are appropriate, volume of emojis, positioning in alerts, etc.). Key takeaways from those discussions are presented below with the hope that they may be of use to newsrooms weighing the pros and cons of using emojis in their push alerts.

Emojis can be divisive: They are never going to appeal to everybody

Emojis can be quite divisive and, as such, any decision about their use in alerts is unlikely to please everybody—both externally, among the audience, and internally, in the newsroom. Indeed, almost all interviewees said that enthusiasm for emojis varied greatly among the people in their respective newsrooms. An audience manager from an outlet where emojis are not considered inappropriate to the brand but have not yet been used in push alerts expressed doubt that his own enthusiasm would be shared across the organization: “Emoji is an interesting one. I’d be up for giving it a go. I’m not sure others would.”

Another participant, based at an outlet that frequently uses emojis in alerts, admitted that attitudes have long varied considerably across their newsroom: “I think when we launched, a lot of people were like, ‘There’s too many, we don’t like them,’ like, older people in the newsroom, but the alerts are also what we get the most compliments on.” According to the same person, these differences of opinion have continued over aspects of their emojis usage, such as volume. She said: “[Some] people . . . think we use too many emojis, [some] like the emojis, [some] don’t, but everyone notices them.”

At the other end of the spectrum, interviewees described how they are actively encouraged to use emojis as frequently as is deemed appropriate. An editor from a digitally native outlet said that emojis in push alerts are “definitely encouraged,” adding that they are used across platforms and act as an important brand differentiator: “I think [our organization] is definitely going to be different from, say, The Wall Street Journal. I mean, we use emojis in headlines, we use emojis in a lot of different things, and it just lends itself well to our voice.”

At large organizations with standalone verticals it also became clear that attitudes around emojis could vary greatly across the same brand, depending on the respective target audiences and goals. A mobile editor from one such vertical argued that their app’s younger target audience
permitted them to use emojis in a way that probably wouldn’t play so well with what she described as the main brand’s older, more traditional demographic:

    I don’t think any other [brand] property really uses emoji . . . Our . . . voice is very different [than the core news brand]. Ours will be much more conversational, have an emoji or have rich media in the notifications. Theirs are much more like: this is the news. [Our app] is very much trying to reach a younger audience.

Other key considerations when handling emojis

At organizations where emojis are deemed brand-appropriate, there are additional considerations around usage that are typically settled on a case-by-case basis. Examples include: volume, positioning, visibility/impact, and even whether or not to use punctuation. Some newsrooms have gone as far as producing emoji style guides to try and aid consistency.

Emojis need to be appropriate to the nature and tone of the alert

A recurring theme across the discussions about emojis was appropriateness. While opinion is largely divided on whether use of emojis should be restricted to alerts deemed “playful” or “fun” (terms that were frequently used in relation to emojis), journalists have a strong handle on when emojis are and are not appropriate. This can mean everything from ensuring that they are not used in the reporting of serious political stories or news of terrorist attacks, to rejecting emojis that are not the perfect shape or color.

One mobile editor from an outlet that frequently uses emojis was keen to assert that there are many instances in which emojis are not appropriate for the news being reported:

    You know, serious news is serious. It needs to be treated with that respect and shouldn’t have an emoji. I think emojis need to be used carefully and have put thought into them. I would much rather have a five-minute debate over whether we should use an emoji and come to an agreement than to use it and feel like we made a mistake.

Another interviewee, based at a digitally native outlet that also makes frequent use of emojis, echoed this sentiment, stating: “With emojis, it’s more if it’s a fun story. We have rarely used them in breaking stories or political stories.” At one outlet—also a digital native—where emojis are permitted for use in breaking news, the tone of the alert was the key consideration: “We use them when it’s appropriate for the tone, which is when we’re trying to be a bit more playful, or if it’s a bit more funny—or at least stories that are, you know, not crime stories, or terrorist attacks, or anything like that. Just only when it’s appropriate.”
Another editor, based at a legacy, regional metro that does not use emojis, argued that emojis simply would not be a suitable fit for the majority of the news they report via push alerts: “Our push alerts are not, ‘Hey, here’s the best happy hour to check out today.’ It’s more likely to be, ‘Little girl shot and killed in her stroller.’ We just are not sending news that you would be using an emoji with most of the time.”

Other people’s requirements are even more granular and specific. For these people, unless there is an emoji that is an entirely perfect fit for the story, they will not use one in an alert. As one mobile editor described it, “We’ve looked at the chart emojis, and the down chart line graph is blue and I’m like, ‘Well, if we actually wanted to use a chart emoji for stock market alerts, then the line should be red. It’s cute but it’s not quite perfect. I don’t think it can work.’ ”

**Consider how many emojis is too many emojis**

On volume, participants described the internal debates that take place around how many emojis are appropriate/acceptable for a given alert, and attempts to decipher the point at which they become excessive/inappropriate. While this may appear to be a trivial matter, it was suggested that an excessive number may negatively impact the tone of the alert and/or audience perceptions of the brand more generally.

One mobile editor, based at an outlet with a particularly liberal approach to emojis in push alerts, explained: “We’ve definitely had conversations over what is too much. I think there should only be two, personally. I think sometimes people do go overboard with them and it feels like, ‘Hey, cool kids! We’re cute!’ ” For this interviewee, the process through which these issues are resolved was another example of the collaborative nature of her organization’s approach to—and workflows around—push notifications. “I think there are too many emojis I will say so. Sometimes I get overruled. That’s the thing, again it’s very collaborative, so if five other people tell me it’s fine, I’ll listen to them. I’ll still disagree, but I’ll listen,” she said.

**Positioning**

Another consideration is where in the alert emojis are positioned. Across our content analysis we saw examples of every variety, with emojis positioned at the beginning, middle, and end of push alerts. However, this is another area that journalists are giving a lot of thought to.

One mobile editor said:

> We think about spacing. We think about whether the emoji should have punctuation after it because then there’s this weird space, so the period looks like it’s not meant to be
there. Actually, I have actually kind of instituted a rule where the emoji should come after the piece of punctuation, and do not add a period because it looks weird—or at the end of the alert, if you have an emoji, please don’t use the period again.

Another editor said they typically place emojis at the end of an alert, but will occasionally position particularly striking ones at the beginning to try and attract the audience’s immediate attention to big pieces of breaking news:

We usually attach them to the end of the alert with a way that is emoji speak or adds on to the alert. The exception to that is if something really unexpected has happened in politics, or just anything that’s really unexpected and huge, then we’ll do a siren alert where we put the siren [emoji] in front of it [the text]. That’s just breaking news stories and it’s not for every breaking news story.

Another person said:

Our guideline for emojis right now is, if we use them it will be with a country flag or something . . . I don’t think we want to use them just tacked on to the end of the alert, we want to actually incorporate them into the alert without it being too cutesy, but also effective. So that’s going to be a hard balance to strike.

Selecting emojis, crafting alerts, and assessing readability

In some newsrooms, exchanges around emojis are as central to the process of crafting alerts as those around written language. As one interviewee put it:

We have a team of about six to nine people on the app team at any given time, so it really depends on who is working. Sometimes everyone weighs in, and that makes for a better alert, like somebody saying, “No you should use this emoji or you should use this word.” We have quite robust discussions around emojis and which emoji to use.

This process of weighing emoji options and fine-tuning, she said, also provided an opportunity to gauge the effectiveness of proposed emojis and to veto those that were unclear prior to publication: “We put the emojis in Slack, so if I can’t read it on my desktop screen, if I can’t figure out what it is, then I will mention that and say, ‘If I can’t figure this out on a big screen, there’s no way I’m going to understand what this alert is on a small screen.’ ”

Unavailability due to internal tools/systems

Emojis are a relatively recent phenomena, and their usage in notifications is even newer. For some, prior even to debates about whether or not emojis are appropriate to an organization’s
brand is the inability to employ them at all simply because of limitations associated with the internal tools/systems used to publish alerts. As one editor explained, “I don’t think we even have the ability to do [emojis] right now, with the way that our push tools work. I’m sure we could do it through Urban Airship, but the way our regular push tool works doesn’t currently support them.”