



Reuters Institute
for the Study of Journalism

NEWS ALERTS AND THE BATTLE FOR THE LOCKSCREEN

NIC NEWMAN

DIGITAL NEWS PROJECT

2016

A large, semi-transparent collage of various digital news interfaces and headlines, including snippets from the New York Times, Washington Post, and BBC, set against a dark blue background.

NEWS ALERTS AND THE BATTLE FOR THE LOCKSCREEN

CONTENTS

About the Author	5
Acknowledgements	5
Methodology	6
Executive Summary	7
1. The Notification Landscape and the Role of News	10
2. News Notifications in Detail	15
3. Current and Future Developments	25
4. Conclusions and Recommendations for Publishers	30
References	32

About the Author

Nic Newman is a journalist and digital strategist who played a key role in shaping the BBC's internet services over more than a decade. He was a founding member of the BBC News Website, leading international coverage as World Editor (1997–2001). As Head of Product Development, he led digital teams, developing websites, mobile, and interactive TV applications for all BBC Journalism sites. Nic is currently a Research Associate at the Reuters Institute for the Study of Journalism where he writes about changing audience behaviour and the impact of technology. He is the lead author of the *Reuters Institute Digital News Report* (2012–16) and the *Reuters Institute Journalism Trends and Predictions* (2016). He also co-authored *The Future of Online Video Report* (2016).

Acknowledgements

Particular thanks are due to the team at the Reuters Institute. Research Director, Rasmus Kleis Nielsen, Annika Sehl, Richard Fletcher, and Antonis Kalogeropoulos provided invaluable advice with survey preparation, analysis, and interpretation. Alex Reid and Hannah Marsh helped ensure a smooth publication process.

The author would also like to thank Stephanie Frost and David Eastbury at YouGov for efficiency of the survey process and Jerry Latter and Kayo Hayashi for coordinating the interviews and translations across four countries and providing expert interpretation.

Published by the Reuters Institute for the Study of Journalism with the support of Google and the Digital News Initiative

Methodology

This research is based on a survey of smartphone users in four countries conducted by YouGov between 26 September and 10 October 2016. Total sample size was 7,577 adults in the UK, US, Germany, and Taiwan. The survey was carried out online. The table below sets out the sample sizes in each country.

	US	TAIWAN	GERMANY	UK
Smartphone users	1881	1025	1701	1797
Smartphone users (%)	81%	98%	81%	85%
News (and sport) alert users	679	413	475	508

Surveyed by



Data quoted in this survey are representative of smartphone users in each country, not of the total online population (row one above). We also look in detail at the subset of people who are users of news and sport alerts (row three). For clarity, the base group along with the sample size is listed under each chart and we also try to make the base group clear when quoting figures within the text. In a few cases we use an aggregate figure, which is produced with an even weighting for each country to produce an 'average' value.

We combined this quantitative approach with a series of 14 in depth interviews. These were drawn from smartphone users who are active users of news and sport alerts. The aim was to understand preferences of this segment more fully as well as to uncover insights about possible future use.

Participants for the qualitative interviews were recruited according to the following specification:

- A split of men/women in each country
- Half aged 18–44, half 45+
- A split of Android/Apple users
- All to have news apps
- All to receive notifications from the news apps
- All to engage with notifications frequently
- Four from Germany, the UK, and the US; two from Taiwan

In addition, background interviews were conducted with representatives of news organisations including the BBC, the *Daily Telegraph*, the *Guardian*, *Financial Times*, and *The Economist* to understand current industry practice and inform the section on future developments.

Executive Summary

As we move from a world of information scarcity to one of abundance, a key question is how publishers and brands can attract attention and build habit. This is a pressing issue on the smartphone, where consumers spend the majority of time with a handful of apps (Forrester Research 2015) that in most cases do not include news publishers. Our own research (Reuters Institute *Digital News Report 2012–16*) has tracked the growing importance of smartphones, the problems of visibility for news brands, as well as the trend to use distributed platforms like social networks to consume news on these devices.

Publishers see the combination of news apps and mobile notifications as a key channel for rebuilding direct relationships with users on this critical device, unmediated by third parties. The amount of consumer usage of news notifications has tripled in many countries over the last three years (Newman et al. 2016) while news organisations have been steadily increasing the volume of news alerts (Newman 2016). Other evidence shows that alerts from news publishers can lead to more frequent usage of specific news apps (University of Texas 2016)¹ building loyalty that may ultimately help deliver revenue. On the smartphone, apps and notifications go hand in hand as pings and buzzes increasingly both interrupt and engage as we go about our busy daily lives. In this regard, the smartphone lockscreen and the accompanying notification-centres on Apple and Android devices look set to become a critical battleground for publishers, platforms and advertisers.

But how do consumers feel about the rising tide of alerts on their smartphones? Are they engaged or annoyed? What makes a good or bad alert? How important is news as a notification category and how might these alerts develop in the years ahead? These were some of the key questions we wanted to address in this research paper using quantitative and qualitative methods across four countries.

Key Findings

News and information is the most important category for mobile alerts after personal communication, social networks and productivity tools. Almost two-fifths of smartphone users in Taiwan (39%) receive news alerts and a third of Americans (33%), but only around a quarter in the UK (27%) and Germany (24%).

- The average number of alerts is around 10 per day but this can go up to more than 40 for heavy smartphone users. Most people say they are wary of irrelevant content being pushed to them on this most personal device. 46% say smartphone alerts feel more intrusive than those received on other devices.
- Some countries are more resistant than others. Only a quarter of smartphone users (23%) in the UK say they typically accept notifications when the choice is offered. This compares with over two-fifths (44%) in Taiwan.
- Around a quarter of smartphone users have uninstalled an app because of the volume of alerts (23%) but many of these are around gaming or shopping rather than news. Over two-thirds of those receiving news alerts (72%) say they value the notifications they receive and many see alerts as a critical part of the news app proposition.
- The majority of those receiving news alerts (73%) are happy with the number of alerts they receive. Taiwanese smartphone users are most likely to complain they get too many alerts (22%), compared with just one in ten (10%) of those in the UK.

¹ The University of Texas study found that 27% of those asked to install specific apps with notifications used them daily – or more often – compared to 12% of those asked to install the same apps without notifications.

- Apple users tend to get more news alerts but only to the extent that they tend to be better educated and more interested in news than Android or Windows users. Take those differences away and there is very little platform impact.
- Younger people tend to get more news alerts than older smartphone users and possibly for that reason they are less likely to have sounds (pings and buzzes) turned on. They are also more likely to adjust default settings in general.

Winners and Losers: Broadcast Brands Do Best

- Broadcast news brands top the list in most countries with 63% of those using news alerts in the UK choosing BBC News. Top alert providers in the US are CNN and Fox, both of which have driven their reputation for breaking news from the TV to the smartphone. In Germany n-tv tops the list while alerts from ARD's Tagesschau app also performs well.
- Only in Taiwan do we see a different pattern where Yahoo News takes top spot, partly because TV brands were slow to get online, ceding breaking news to Yahoo.
- Most usage is currently with news brands rather than aggregators or platforms. Despite this, the recent launch of alerts through Apple News is already starting to change this dynamic for iPhone users and Facebook Messenger is offering new opportunities for anyone to use this platform to deliver messaging to the lockscreen.
- Sports brands also do well in many countries, with BBC Sport in UK and Kicker in Germany most frequently cited. Sports scores are more valued than match reports, and users of both skew heavily male.

Which Alerts Do Best?

- Breaking news (66%) is by far the most important type of news alert that is accessed but valued by users. This is partly because this makes up a significant proportion of alerts sent but also because people are generally prepared to wait to catch up on less time-sensitive news.
- In terms of tone around serious news, alerts were valued when they were delivered quickly using straightforward language. Clickbait headlines and emojis were strongly disliked in this context. There is far more latitude for creativity with feature content, lifestyle, entertainment, sport, and technology.
- People click on the alert about half the time. This depends on the context and the decision is primarily driven by type of alert, the headline, and the interest this evokes. They are happy to receive 'a few too many' alerts (so they don't miss stories) in the knowledge that they can easily ignore them or swipe them away.
- We found significant frustration with current apps and notifications in terms of the lack of personalised options. Beyond breaking news, there are significant unmet needs for more relevant alerts around passions and work niches. Despite this, to date few people had personalised their alerts when the option was available and a substantial minority didn't know how to find or change settings.
- In terms of prospects for growth, around four in ten (38%) of those not getting news alerts say they have 'no interest' in taking them in the future. About a third (31%) might use them if more personally relevant alerts could be sent, while an even bigger group (36%) might use them if they could control the number and timing of alerts.

Summary

Overall, these data show the surprising extent to which news alerts are already used and valued by existing users. Notifications are increasing the regularity with which people come back to their favourite news brand in the face of rising competition from social networks and other aggregators.

But our research also suggests there is considerable growth potential for publishers because (1) smartphone use continues to increase, (2) those markets where smartphones have higher penetration have a higher number of alerts (Taiwan), and (3) younger groups are disproportionately using notifications and building them into their daily habits.

Despite this, there is clearly a danger that a greater volume of alerts sent by publishers and advertisers will lead to a consumer backlash in the future. In this regard, publishers should focus as a matter of urgency on improving the relevance of their alerts through a combination of passive personalisation and more transparent and explicit controls.

Beyond breaking news, we believe that there is a much wider range of opportunities to deliver more relevant timely news messages, satisfying unmet needs. Crucially, improvements to notification payloads over the next few years from mobile platforms and messaging apps will also offer opportunities to deliver alerts with new formats and approaches. These issues are discussed in the future development section in Chapter 3.

1. The Notification Landscape and the Role of News

In this chapter, we explore some of the findings of our survey of smartphone users on the overall notifications landscape. This helps provide the context into which news alerts are delivered.

First-generation notifications were almost exclusively limited to text messaging (SMS), partly because of the cost associated with each message, even if it was part of a mobile subscription bundle. Today, most alerts and notifications are delivered through internet-enabled data connections and are effectively free to the consumer, while scalability is relatively cheap for the provider. They are also mainly linked to some kind of app that is either pre-installed or has been downloaded by a user. As part of the install process, the user is often offered the chance to accept or reject notifications, which may or may not include news.

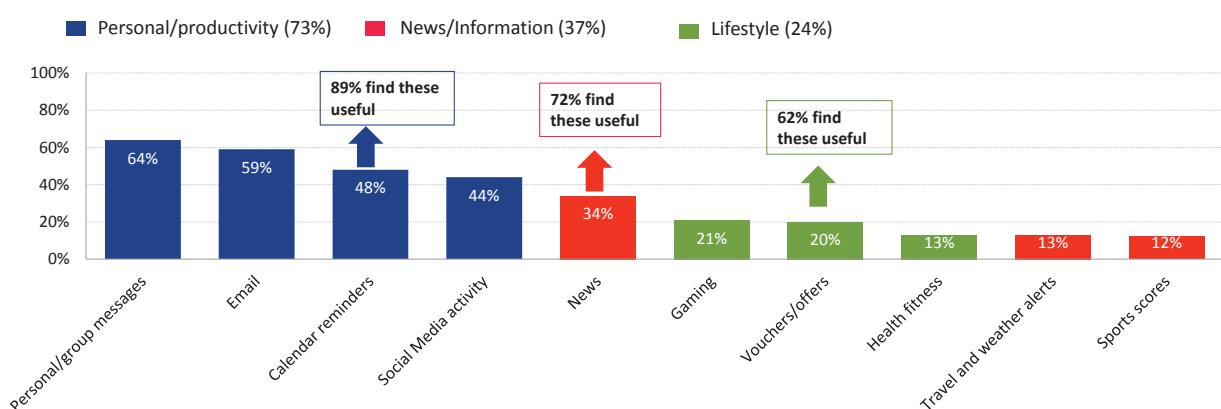
Types of Messages

Because of the competition for attention, most popular apps, whether they are social networks, games, fitness apps or shopping discounters, send a variety of notifications in order to drive more regular usage or to communicate new features. Other push alerts are a key feature of productivity apps – for example reminders about upcoming meetings linked to an electronic calendar. Work-related communication such as email and chat apps like Slack can also add to the steady stream of messages being pushed to users through the day.

Loosely we can group alerts and notifications into three groups:

- Personal or work-based productivity messaging (including social media, SMS and email, calendar reminders)
- Timely news and information updates (news, sport scores, weather, and travel)
- Lifestyle and leisure alerts (gaming, fitness, health, shopping vouchers, etc.)

Figure 1.1 Percentage of smartphone users receiving different message types



Q2: Which, if any, of the following types of alerts and/or notifications do you ever receive on your smartphone?

Base: All smartphone users online, US = 1881, Taiwan = 1025, Germany = 1701, UK = 1797

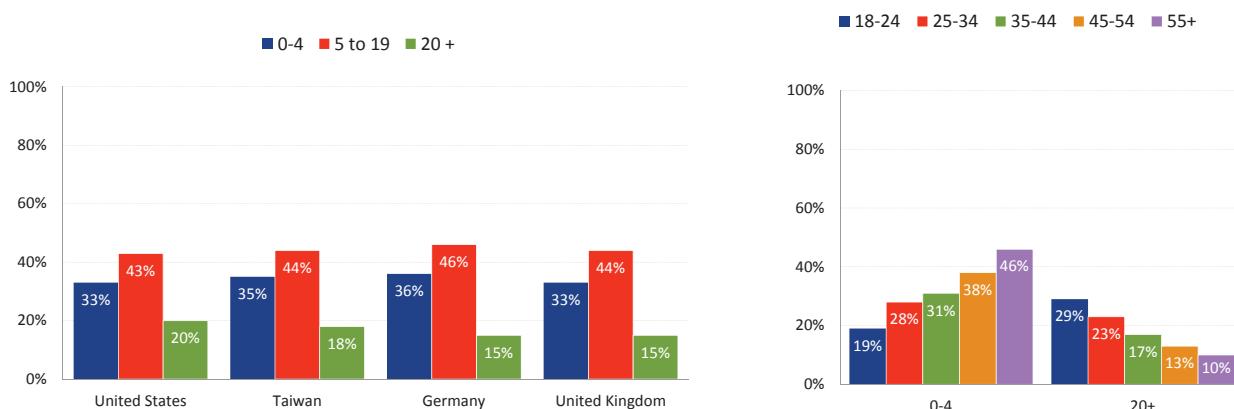
In general, personal messages are most used and considered most valuable by smartphone users, with, for example, 89% of those that receive calendar reminders finding these useful. Fewer people use news alerts and sports scores but satisfaction levels are high (72%). Leisure alerts are generally used less and valued less.



Number of Alerts Received

There is a similar pattern in the distribution of alerts across the four countries polled (see Figure 1.2). The median number is around ten alerts per day with a subsection of users (about 17%) getting more than 20 alerts a day. There are fewer of these heavy users in the UK and Germany. In general, young people (18-24s) are three times more likely to receive more than 20 alerts each day compared with over 55s. They are half as likely to receive fewer than five alerts each day.

Figure 1.2 Number of alerts received by users by country and age

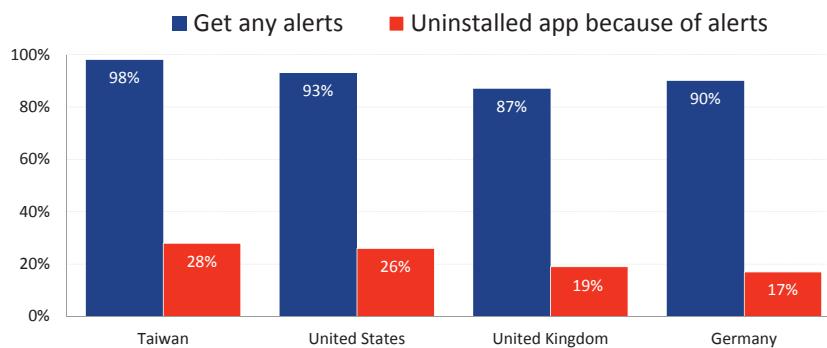


Q4. Approximately how many alerts/notifications, if any, do you receive in TOTAL in an average day?

Base: All smartphone users online who ever receive alerts, US = 1668, Taiwan = 991, Germany = 1465, UK = 1494

Around nine in ten smartphone users (92%) get some kind of alert at least once a day. About a quarter in some countries say they have uninstalled an app in the last year because of the excessive number of alerts/type of alerts they receive. This number is greatest in Taiwan (28%) and least in Germany (17%).

Figure 1.3 Percentage of alerts received by country compared with uninstalls because of excessive alerts



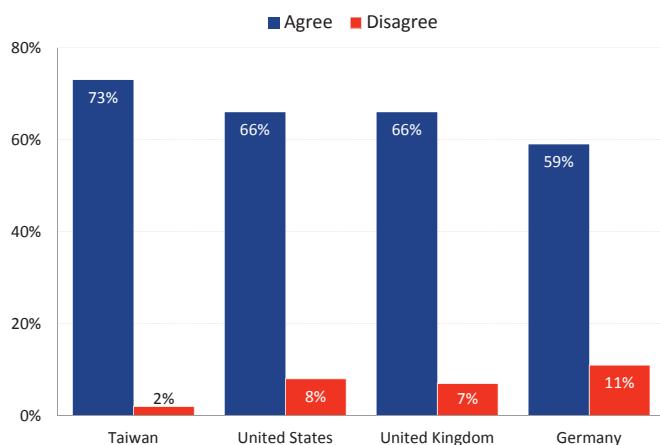
23% have uninstalled an app in the last year because of the notifications that come with it

Q2: Which alerts do you ever receive on your smartphone and Q7: Have you uninstalled an app in the last year because of the number/type of alerts/notifications it sent me?

Base: All smartphone users online, US = 1881, Taiwan = 1025, Germany = 1701, UK = 1797

People generally love alerts, but there is also evidence that they can become frustrated by irrelevant alerts and remain wary of content pushed to this most personal device. This is especially true for users in Taiwan who receive the largest number of alerts in total.

Figure 1.4 Percentage that say they are wary of content pushed to this personal device



AGREE

"I use my phone for my personal day to day life and don't want it filled up with stuff I don't need"

"I don't want to be spammed with info – it would drive me insane"

"Wary of personal details being accessed"

DISAGREE

"I am confident in my ability and knowledge to have control of things"

Q18. To what extent, if at all, do you agree or disagree with the following statement? The personal nature of a smartphone makes me careful about the type of information I allow to be pushed to me

Base: All smartphone users online, US= 1881, Taiwan = 1025, Germany = 1701, UK = 1797

The smartphone is also seen as more intrusive than other devices, again with the strongest negative feelings in Taiwan. The always-on nature of the device makes many users feel persecuted by alerts.

It keeps on buzzing until you see them. It's like bugging you all day long.

The phone is always with me. The other devices aren't and therefore are not as much of a nuisance.

I feel compelled to check them immediately.

Other users, particularly in the UK and Germany, feel more confident in their ability to control the number of alerts as needed.

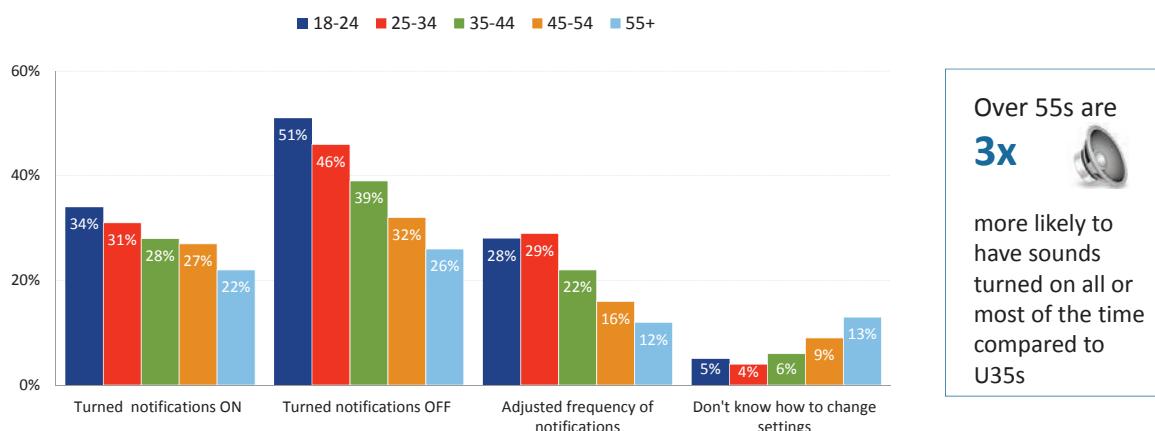
If I found them intrusive, I wouldn't have them on my phone.

I spend more time on my computer so alerts on it are more irritating than those on my smartphone.

Setting Preferences, Accepting Notifications and the Use of Sounds

Overall, younger and more confident smartphone users are more likely to control their settings. More over-45s say they don't know how to change settings for notifications, compared to under-35s. Younger groups are also much less likely to have sounds on – probably because they receive many more messages and are checking the phone more frequently.

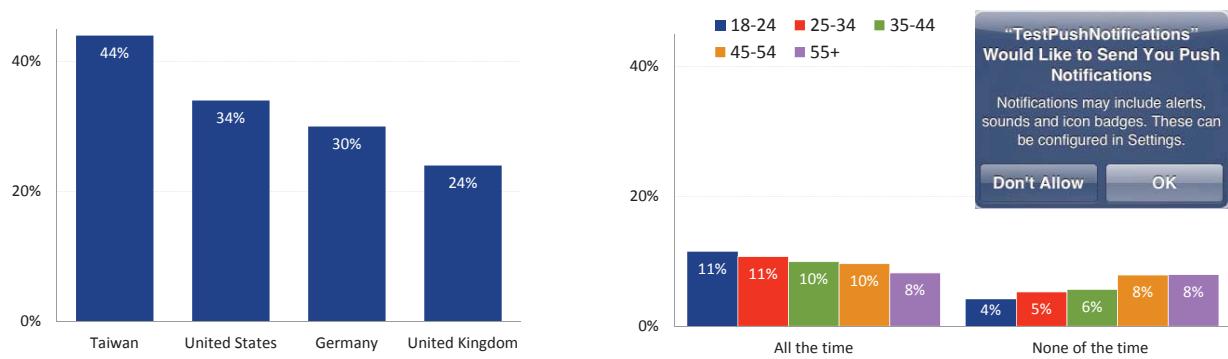
Figure 1.5 Percentage changing notification settings by age



Q7. Have you done any of the following over the last year?

Base: All smartphone users online, US = 1881, Taiwan = 1025, Germany = 1701, UK = 1797

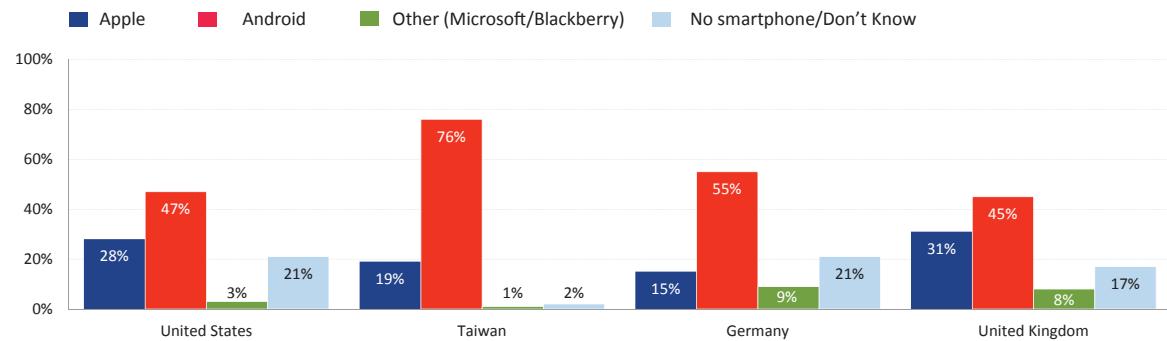
On average around half of all smartphone users who use alerts have sounds turned on all or most of the time, with the highest proportion in Germany (54%) and the lowest proportion in the UK (42%). Over two-fifths (44%) of Taiwanese smartphone users accept notifications all or most of the time when offered. In the UK only a quarter (24%) do this. Young people are more likely to accept notifications than older groups.

Figure 1.6 Percentage Accepting notifications in the first place

Q6: When installing a new app, you will usually be asked if you are prepared to accept and receive alerts and/or notifications from the app. How often do you do this? Showing all or most of the time
 Base: Those who receive alerts and notifications, US = 1668, Taiwan = 991, Germany = 1465, UK = 1494

The Impact of Platform

Google's Android is the biggest platform in every country surveyed but Apple devices play a bigger role in the UK and US (see Figure 1.7). The latest Apple software release (iOS 10) has increased the prominence of alerts and introduced a range of new features that may over time considerably change the experience (see Chapter 3). Android is on the same path and recent upgrades have added prominence for notifications and increased the potential payload.

Figure 1.7 Percentage using each mobile platform by country

Q1: Which ONE, if any, of the following BEST describes which operating system (OS) your smartphone uses?

Base: All adults online, US = 2336, Taiwan = 1044, Germany = 2093, UK = 2104

Users of the Apple operating system (iOS) tend to receive 10% more news alerts on average than Android users, but we need to bear in mind that this is largely because they have higher levels of education and are more interested in news. In countries where this doesn't apply, like Taiwan, we see no platform effect.

By contrast, Apple users in the UK get more than half (53%) of all news notifications, despite only making up 31% of smartphone users. This may be because UK news publishers have focused more on Apple apps than Android ones in the past.

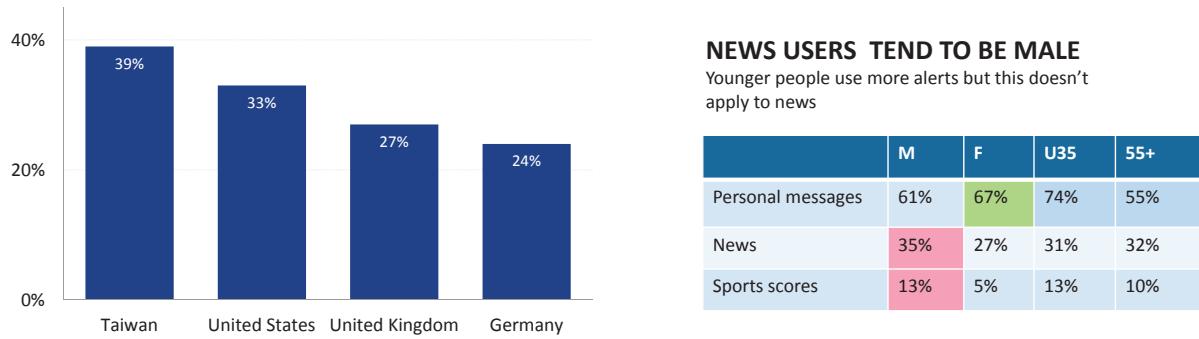
2. News Notifications in Detail

In this chapter, we drill down into current news behaviour around news alerts using survey data alongside insights from our in-depth interviews with news users.

The Key Numbers

Almost four in ten (39%) Taiwanese smartphone users get news alerts, compared with just a quarter of smartphone users in the UK (27%) and Germany (24%). As Figure 2.1 shows, users of news alerts and sports scores tend to be male, whereas users of personal messaging tend to skew female.

Figure 2.1 News alerts by country and age

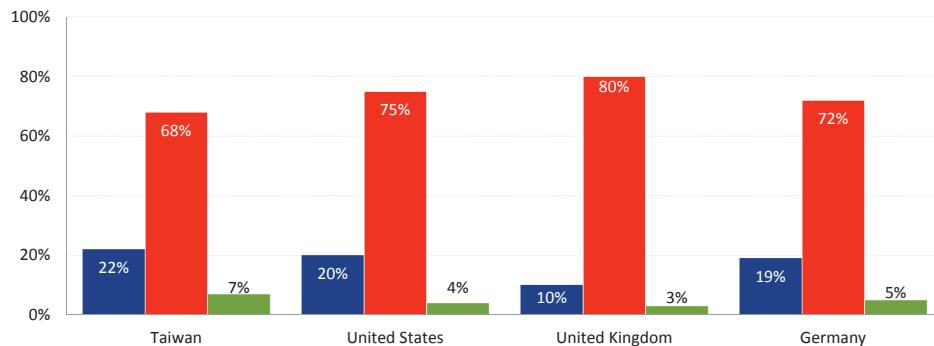


Q1: Which, if any, of the following types of alerts and/or notifications do you ever receive on your smartphone?

Base: All smartphone users online, US = 1881, Taiwan = 1025, Germany = 1701, UK = 1797

Based on the wider *Digital News Report* data we know that people who receive alerts are twice as likely to be part of the relatively small *news lover* group that is both interested in news and accesses news frequently, compared with more *casual users*.

Despite getting fewer news alerts, users in the UK say they value them more than those in Taiwan (77% compared with 64%). This higher level of satisfaction in the UK can also be seen in the high percentage (80%) saying they get ‘just the right number of alerts’ shown in Figure 2.2. Only one in ten say they get too many news alerts in the UK compared with 22% in Taiwan.

Figure 2.2 Perceptions of the number of news alerts by country

Q10a: Would you say that the amount of news alerts/notifications you currently receive on your smartphone are too few, too many, or about the right amount?

Base: Those who receive alerts and notifications for news/sports news, US = 679, Taiwan = 413, Germany = 475, UK = 508

In our qualitative interviews we found users in all countries to be generally satisfied with the frequency of mobile news notifications. Most of those we spoke to preferred to receive slightly too many and to put up with irrelevant alerts because they felt it was better than missing out.

I don't want to disable my notifications. There might be something I am interested in. (Female, US)

Users were generally confident to swipe/delete notifications if they weren't relevant but some news brands were specifically chosen because they could be trusted not to send too many alerts.

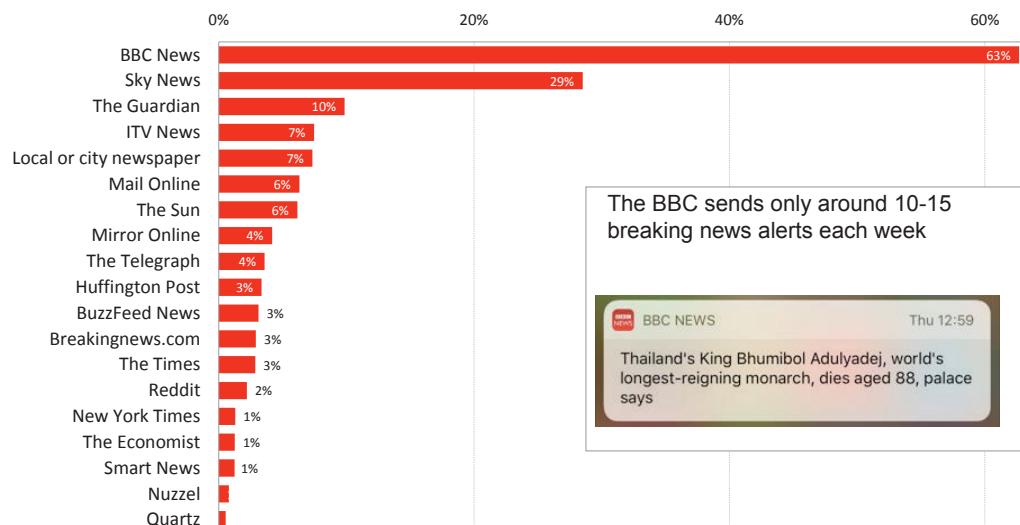
Tagesschau [German public broadcaster] don't send a massive amount of notifications, they only send the most important ones. It's manageable and that's important. (Male, Germany)

The sound of frequent notifications is often seen as irritating and many tend to keep their phone on silent/vibrate when at work but are happy to turn it on when they get home.

I don't like getting auditory notifications. I'd like just flash-ups to tell me there is something there, without necessarily showing me what it is. That's obviously a bit more private. (Male, UK)

United Kingdom

Almost two-thirds of those receiving news alerts (63%) in the UK currently receive them from the BBC (see Figure 2.3), which has made a point of only sending a small number of alerts each day on matters of national and international importance. The *Guardian* has been experimenting with new alert formats linked to its app while Mail Online, the UK's most popular online newspaper, performs relatively badly with alerts. Much of its traffic comes from social media or search rather than loyal direct traffic linked to an app.

Figure 2.3 Top brands for news alerts (UK)

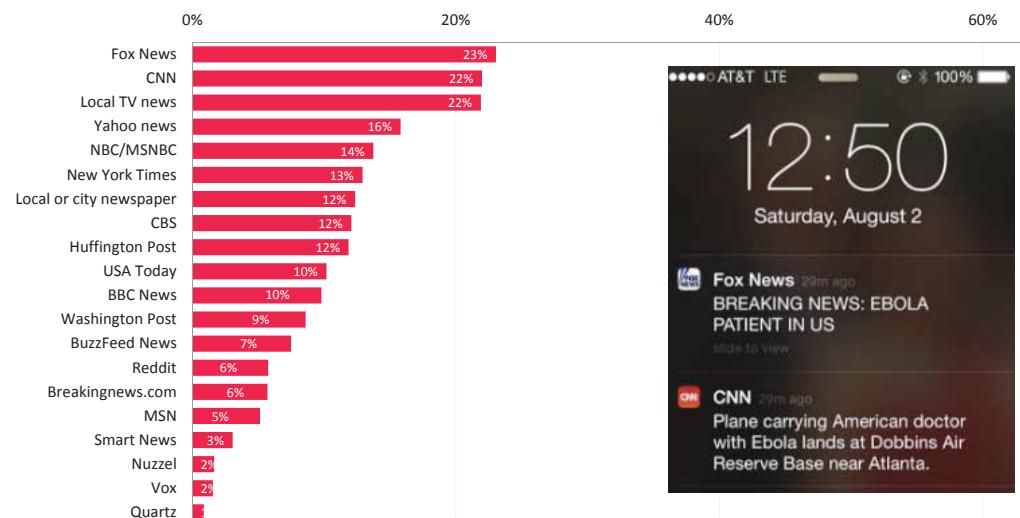
Q9. Which, if any, of the following apps do you receive news alerts/notifications from?

Base: All smartphone users who receive news/sport alerts, UK = 508

BBC Sport and Sky Sports were also the most frequently cited services in this genre. Both have recently started to experiment with a wider range of alerts including personalised football alerts, reminders of match starting times, and increasing use of rich media such as video.

United States

Media companies with a TV background (Fox and CNN) battle it out for top spot in mobile notifications, building on a reputation for breaking news established via cable TV. The *New York Times* is investing in a wide range of mobile alerts. Quartz has launched a critically acclaimed ‘conversational’ app, which uses notifications as a primary traffic driver. Breakingnews.com is a start-up, which focuses just on notifications across multiple platforms including its own apps. Others, like the *Wall Street Journal* and *Guardian America*, have been leveraging messaging functionality within Facebook Messenger to get alerts to the lockscreen.

Figure 2.4 Top brands for news alerts (US)

Q9. Which, if any, of the following apps do you receive news alerts/notifications from?

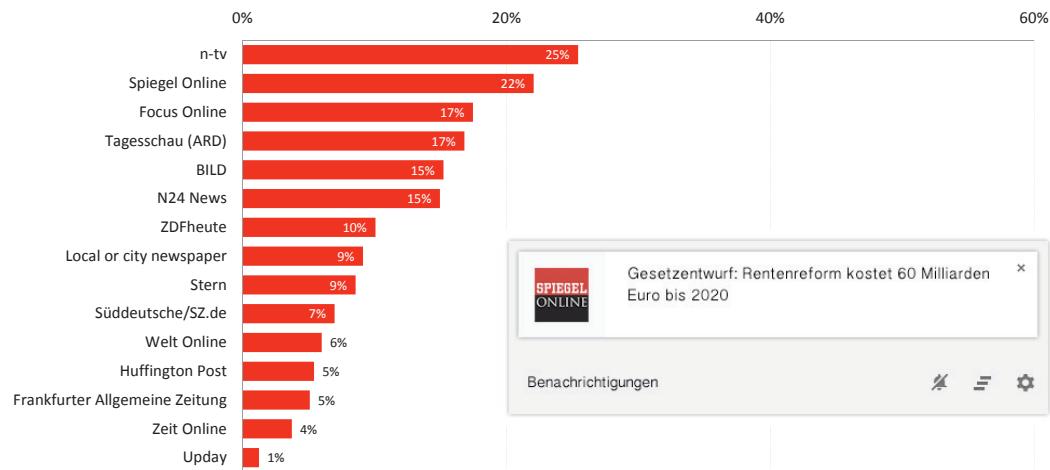
Base: All smartphone users who receive news/sport alerts, United States = 679

Germany

The top brands for notifications in Germany broadly reflect the strongest online properties but again a TV company (n-tv) overperforms. It was one of the first to develop a news app in 2009 and has also experimented with sending alerts through WhatsApp.

Public broadcasters ARD and ZDF have a strong alert presence linked to their apps, despite protests and at least one legal challenge from German publishers. BILD's app is a paid-for product which is likely to be one factor reducing the reach of its news alerts. Sport apps like Kicker are also heavily used in Germany for football goal alerts.

Figure 2.5 Top brands for news alerts (Germany)

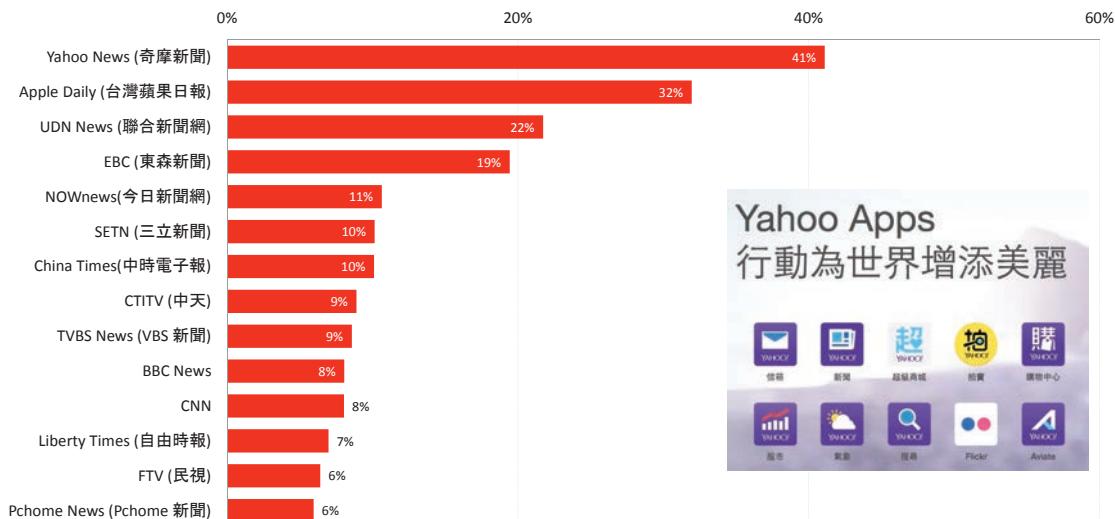


Q9. Which, if any, of the following apps do you receive news alerts/notifications from?

Base: All smartphone users who receive news/sport alerts, Germany = 475

Taiwan

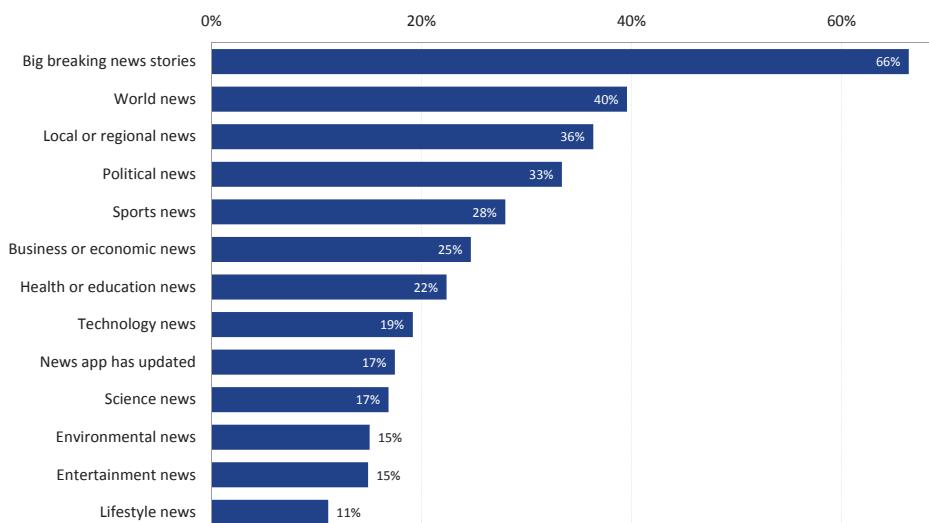
Yahoo News is the most widely used for notifications followed by Apple News, Taiwan's leading Chinese-language newspaper, and UDN a popular daily broadsheet. Foreign news apps like the BBC and CNN also perform well with younger users.

Figure 2.6 Top brands for news alerts (Taiwan)**Q9. Which, if any, of the following apps do you receive news alerts/notifications from?**

Base: All smartphone users who receive news/sport alerts, Taiwan = 413

Types of News Alerts

Breaking (66%) and world news (40%) are the most valued content types for smartphone users who use alerts across all countries. This is not surprising as it is also currently the main focus of news alerts sent by news organisations. Users in Taiwan are particularly interested in technology alerts, as well as entertainment and lifestyle. Germans tend to be less interested in breaking news (59%), compared with the other countries surveyed but are more interested in political and regional alerts. British users have a strong interest in breaking news (64%) as well as sport scores (35%). Finally, US smartphone users have a strong interest in political news (39%) and breaking news (69%), though this is perhaps not surprising as our research was conducted at the height of the 2016 presidential campaign.

Figure 2.7 Interest in different types of news alerts (all countries)**Q11. Which, if any, of the following types of alerts do you find valuable when you receive these?**

Base: All smartphone users who receive news/sport alerts, US = 679 Taiwan = 413 Germany = 475 UK = 508

Is the Notification Enough?

For many users in many contexts, just the notification itself is enough and delivers considerable value.

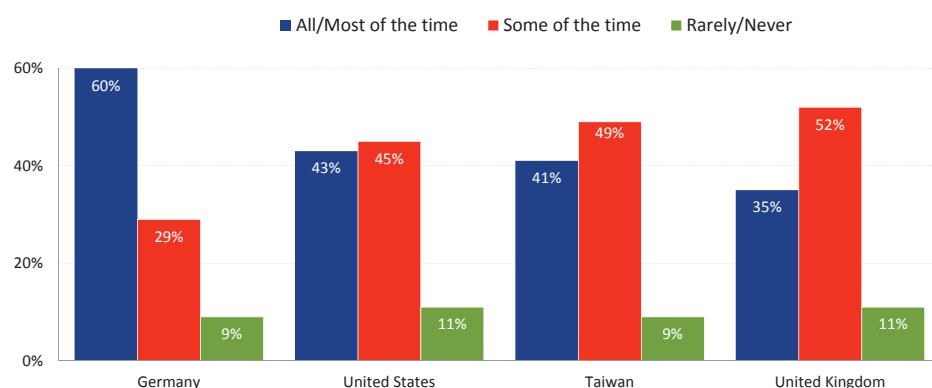
It's ideal to get 80% of information just from the notification without clicking into the full article. (Male, Taiwan)

I unlock my phone, swipe down with my finger, get the quick view and then I see that there was a notification. From the first few words, I usually know if it's interesting for me or not. And sometimes, I don't want to read it. (Male, Germany)

At other times, and for other users, the alert is a useful prompt to click to a full article or video.

Overall, only less than half of alerts (44%) said they tap on these to receive them to get further information, with Germans the most likely to click back to a story.

Figure 2.8 Extent to which users click on alerts to find out more



Q13a. Approximately how often do you tap on an alert to read the full story?

Base: Those who receive alerts and notifications for news/sports news, US = 679, Taiwan = 413, Germany = 475, UK = 508

There are currently no advertising opportunities for publishers on a lockscreen, so the aim for most publishers is clickthrough. Subscription-based and publicly funded news organisations are also interested in bringing users back to an app where they can engage them in more content. But there is clearly a balance to be struck around conveying new information and enticing users to click for more.

In our interviews, we found that it was important that the language used in the notification was factual, displaying a clear and accurate summary of the story. 'Clickbait' or sensationalist headlines were viewed dismissively.

The news title doesn't match with the content sometimes. It feels like being cheated. (Male, Taiwan)

Tone and Language

Across markets, there was a strong sense that the language used in the notifications needs to be sober and serious, to reflect the nature of the important ‘breaking’ news item that lies behind it. This was particularly true in Germany, but a little less important in the United States. We explored a range of different tones and approaches for alerts including the use of emojis and headlines that tease or ask questions. Overwhelmingly a neutral tone was preferred but there was much more latitude for creativity and humour with feature content, lifestyle, entertainment, and sport.

I'm not that interested in teasers because they can get a bit irritating if you want to find out about something. (Male, UK)

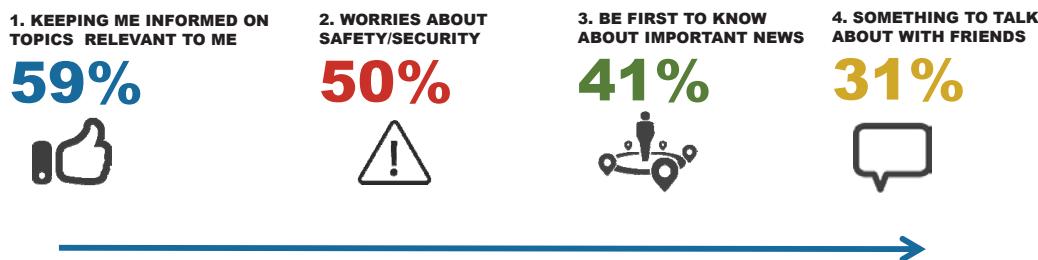
I prefer facts. I don't need to guess what it means. It should be simple and clear. I could decide to read or not by just a quick glance. (Female, Taiwan)

Motivations for Getting Alerts

The most important reason for signing up to alerts was to keep informed about things relevant to personal interests (59%). A further quarter (28%) said they used alerts for following topics relevant to work interests. There is clearly a significant demand for personalised and targeted alerts. At the same time, it is clear that users don't want to miss out on important news. Half (50%) said that they wanted to know about news that might affect their personal safety or that of their friends or colleagues, perhaps not surprising given current fears about terrorist attacks, random shootings, and crime levels in many countries. This figure was considerably higher in Taiwan (62%) and the United States (56%) than in the UK (37%) and Germany (36%).

Four in ten (41%) said they used alerts because they wanted to be *first* to know about breaking or important news. This motivation partly relates to interest in news in general but there is also a connection with using news as a conversation starter. Almost a third (31%) said that alerts and notifications provided something to talk about with friends and colleagues.

Figure 2.9 Reasons for using news alerts



Q12. Which, if any, of the following are reasons why you ever use a news (or sports news) alert service?

Base: Those who receive alerts and notifications for news/sports news, US = 679, Taiwan = 413, Germany = 475, UK = 508

Those Who Don't Receive News Alerts

In terms of understanding the potential for growth, we also explored the motivations of those who have *not* yet signed up to news alerts and looked at what features might encourage different groups to do so in the future.

ALERT AVOIDERS

About half (51%) are deliberately avoiding news notifications on their smartphone but for a range of different reasons. Just under a third (30%) say they are interested in news but don't want or need to see it on their phone. More than one in ten (14%) say they are trying to spend less time on their smartphone, almost one in ten (8%) say they are not interested in news at all, and 8% say they don't want to hear about bad or negative news on their smartphones during the day.

I feel miserable when I see bad headlines. Who wants to wake up to six children dead in Australian shooting spree?

OVERLOADED

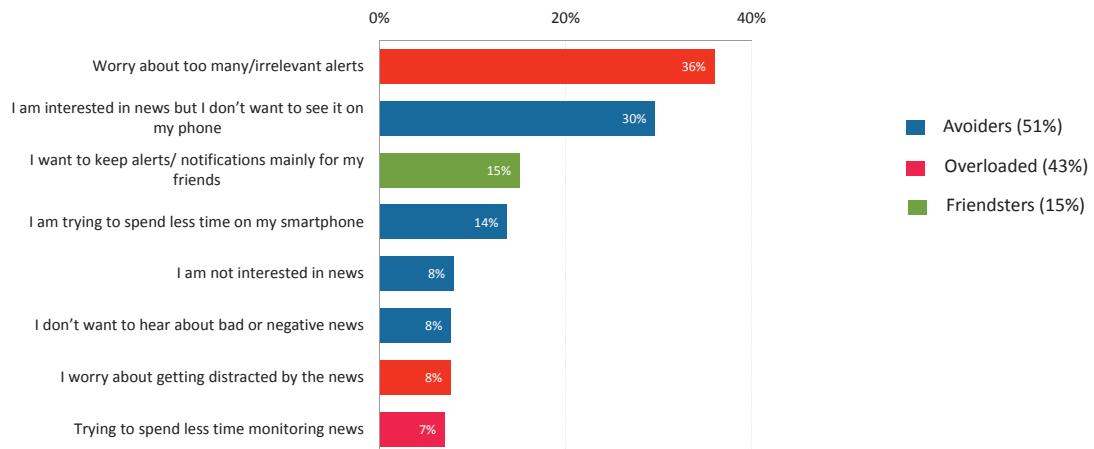
Just over a third (36%) are concerned about being sent too many alerts or alerts that are not relevant to them. About one in ten (8%) worry about getting distracted by the news (taking them away from other tasks that are more important or more interesting to them) while a similar percentage (7%) say they are trying to spend less time monitoring news. In total this group of Overloaded users make up 43% of those not currently receiving alerts.

I just don't want things to be constantly bombarding me.

FRIENDSTERS

There is a further group that does not sign up for alerts because they prefer to keep alerts for messages from their friends (15%). This group has a higher proportion of young people in it because of the focus on using smartphones to communicate with friends.

Clearly there are overlaps between these three groups of *Avoiders*, *Overloaded*, and *Friendsters*, but the extent to which people can be persuaded to engage with news alerts will likely depend on these core motivations, which in turn are based on the wider context of their lives.

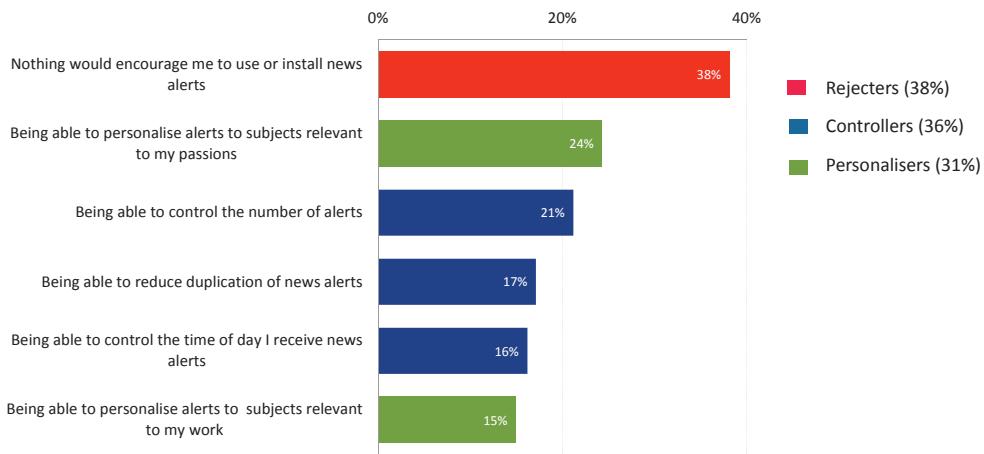
Figure 2.10 Reasons for not getting news alerts

Q16. You said previously that you don't receive alerts/notifications on your smartphone for news. Which, if any, of the following are reasons for this?

Base: Smartphone users who do not use alerts = 4329

Potential for Growth

In the light of these reasons for rejecting news alerts, we asked users what might encourage them to sign up. Around four in ten (38%) said nothing could persuade them to do so. A significant proportion of these were *Avoiders* who have decided that the smartphone is not a place for news or are actively trying to spend less time on their smartphone. The other two groups listed above said they would potentially be much more interested if there were more *controls* (36%) over frequency and time of day or if alerts could be *personalised* (31%).

Figure 2.11 What features might encourage you to sign up for news alerts?

Q17. Which, if any, of the following features would encourage you to use or install alerts/ notifications for news (or sports news)?

Base: Smartphone users who do not use alerts = 4329

Our data show that more than half of users (58%) who say they don't currently use alerts because they are worried about too many/irrelevant alerts could be persuaded by features that provide more

control. More than half (53%) of the same group are interested in options that would provide more relevant or personalised alerts. This marks a significant opportunity.

The smaller Friendster group, which tends to be younger is a little less biddable but four in ten (40%) could also be persuaded by more relevant and personalised alerts, particularly if news organisations extended them beyond political and world news.

3. Current and Future Developments

In this section we explore new approaches from media companies, as well as detailing technical changes that are being introduced by platforms. This is not a comprehensive survey, for which much more detailed research would be required. Rather, it is a snapshot of activity from leading media companies to illustrate how the market might develop and to contextualise the audience perspective that is the main focus of this report.

Across the industry we see considerable interest in alerts and notifications as news organisations look to engage loyal users in the face of intense competition from platforms and other providers.

App-Based Approaches

News companies with strong install app bases have been focusing on these direct channels for increasing engagement.

The *New York Times* has set up a team to specifically focus on creation and scheduling of notifications and push alerts without overly annoying and interrupting users.

We used to be standing on a hill and shouting messages at people, [but now] there's a growing number of users who only engage with us when we send a push.²

Andrew Phelps, Product Director of Messaging and Push, NYT

Through 2016 the *Times* has been focusing on personalising notifications to people's interests, going beyond breaking news. Experiments have involved customising pushes based on reading history, time of day, language, and also based on the author of a particular story. For example, a story about the renaming of Mount McKinley as Denali was pushed only to audiences in particular time zones, while a notification about a magazine story on Columbia twins was sent (in Spanish) to those who had Spanish language selected as their preferred language on their mobile.

BBC Sport has had success through sending breaking alerts to several million people along with automated football and cricket scores based on known preferences. Many of those alerts provide a useful service in their own right but don't create significant engagement or bring people back to the BBC app. Now the Salford-based team is looking to extend the choice of personalised alerts but also bring more return traffic. They are trying to engage users with exclusive content, including reminders when live coverage is about to start, post-match analysis, and video highlights content. The team has also been trying to understand more about the frequency of alerts and the right time to interrupt users. An early morning alert for an Olympic video round-up, for example, reached tens of thousands of users each day.

What we've found is that a good alert is as powerful as a Facebook post.³

Stuart Rowson, Editor, BBC Sport online

BBC News is also embarking on a new project to deliver more customised alerts. It is looking to use its huge installed base of app users to extend notifications beyond breaking news and will be exploring tone of voice, new formats, and more personalised alerts over the next year. More broadly, the wider My BBC personalisation project is exploring machine learning and segmentation techniques to improve messaging across platforms and genres.

² <http://digiday.com/publishers/inside-new-york-times-new-push-notifications-team>

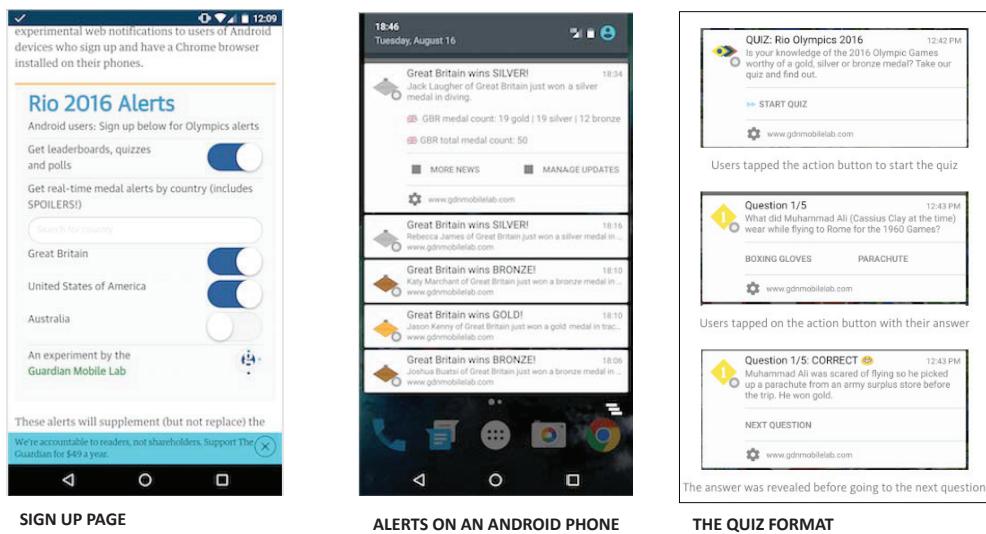
³ Personal communication with Stuart Rowson, Editor, BBC Sport online, Nov. 2016.

Web-Based Approaches via Android

Many publishers do not have the advantage of a large installed app base and have been exploring other ways to get content to users.

The Guardian Mobile Innovation Lab has been conducting a series of experiments around notifications through 2016. Many of these were aimed not at app users, but at reaching audiences through browser-based technologies on Android devices (Chrome). During the Olympics they tested formats for Android users, such as real-time medal alerts, a daily leaderboard, quizzes, and a ‘morale meter’ poll.⁴

Figure 3.1 Guardian Mobile Innovation Lab Olympic experiments



Overall, the *Guardian* found that the ‘utility-based’ medal alerts and leaderboards were much more valued by users than the interactive quizzes and polls. Critically, it also found that if personalisation was offered, it would be used, even if - as in this case - there were over 200 country-based options. The *Guardian* also ran experiments via Android’s Chrome browser for the Brexit vote and during the US presidential election debates.

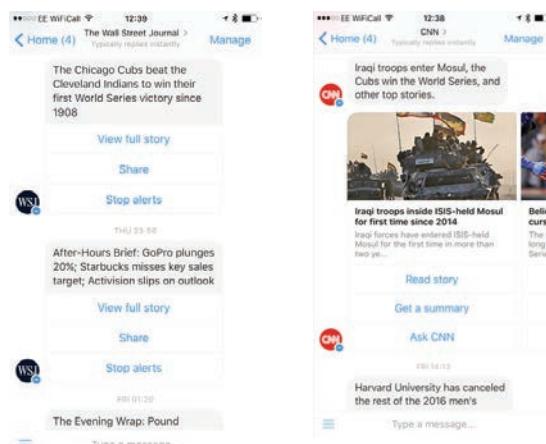
Bots and Chat Apps

Chatbots are artificially intelligent programmes that interact with people through messaging apps like Facebook Messenger, WhatsApp, Kik, or Line. Publishers are interested because these platforms have almost as many users as social networks, though very few are currently using these for news. In April, Facebook opened up its Messenger platform to let publishers (and brands) interact with its one billion active users. Because Messenger is an app, it is also possible for publishers to use this mechanism to deliver alerts direct to the lockscreen on Apple or Android devices. Subscribers to CNN receive a daily digest of top stories right within the Messenger interface (see Figure 3.2). The bot can also recommend personalised content based on a user’s preferences and learned interests or it can hold a conversation with a user about an ongoing story.

⁴ <https://medium.com/the-guardian-mobile-innovation-lab/what-we-learned-covering-the-olympics-through-notifications-fd293b8839ab#.gse4i48f>

The *Wall Street Journal*, Business Insider, and ABC Australia are other publishers who have launched products for Messenger.

Figure 3.2 Wall Street Journal and CNN Chat bots (right)



Mic has developed a bot called Mic Check Yourself, which focuses more on deep dive interaction with one top story a day. In sport the NBA experimented with a bot that allowed users to request specific highlights featuring any player from the two teams in the 2016 finals.

The *Financial Times* experimented with WhatsApp around the Brexit vote. This initially involved offering a free (non-paywalled) story each day and then for a few days a channel with all Brexit content available without a paywall. *The Economist* has been experimenting with messaging app Line, which is popular in many parts of Asia. Line surfaces content via push notifications and via a Facebook-style homepage feed. *The Economist* team has been experimenting with different types of bitesize messages, including audio push alerts.⁵ For subscription-based businesses these chat-based alerts and bots may be more useful for marketing than building relationships with existing users.

Publishers say that their notifications experiments often have a bigger payback than traditional email alerts but this may be because they are engaging with early adopter audiences or that spam has not yet become a significant issue. The prize may ultimately be greater than email but getting people to sign up for alerts in this personal space remains a key challenge.

Other Aggregator Platforms

Beyond chat apps there are a number of other aggregator apps that are targeting the mobile notification space. Flipboard, Smartnews, Nuzzel, and Upday use largely automated notifications to drive much of their traffic. Fast-moving or popular stories tend to be prioritised by these apps, with some taking advantage of social connections too.

Apple News introduced notifications for the first time with the iOS 10 upgrade providing another opportunity for publishers like CNN and the *Daily Telegraph* in the UK (both launch partners) to reach the lockscreen,⁶ though the resulting clickthrough goes to the Apple News version of the story. CNN have suggested the new Apple functionality is a game changer, reporting that daily notifications grew from 188,000 users at launch to 3.7 million just a few weeks later.⁷

⁵ <http://www.thedrum.com/news/2016/05/07/economist-talks-advantages-line-over-whatsapp-mobile-messaging-push-and-personal-conversation-with-Denise-Law>, *The Economist* community editor, Oct. 2016.

⁶ Personal conversation with Mike Adamson, *Telegraph*, Oct. 2016.

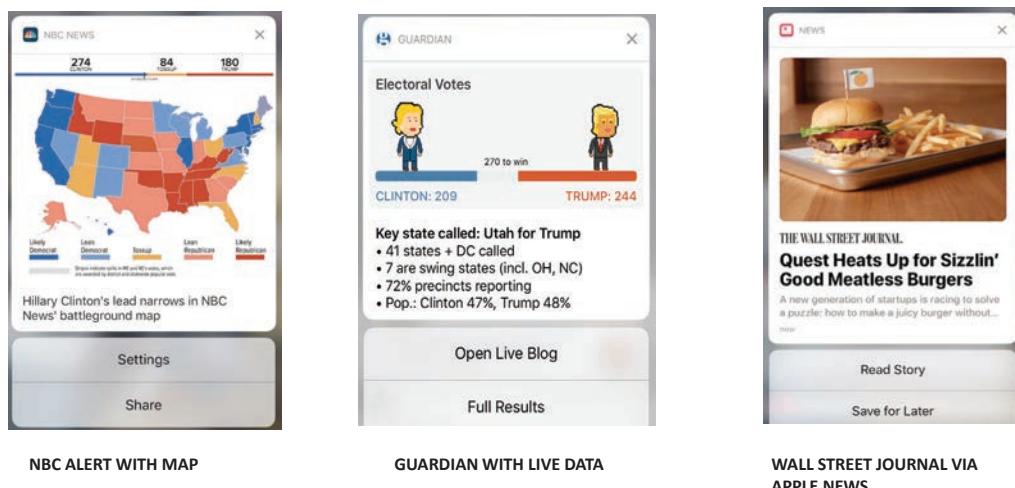
⁷ <http://www.niemanlab.org/2016/11/after-a-slow-start-apple-news-is-emerging-as-a-significant-traffic-driver-for-some-news-orgs>

Richer Payloads on the Way

Equally significant has been the overhaul of the entire notifications system within the iOS 10 operating system. This enables a much richer set of menus to be offered along with rich media such as videos, graphics, and even live data being pushed directly to the lockscreen.⁸

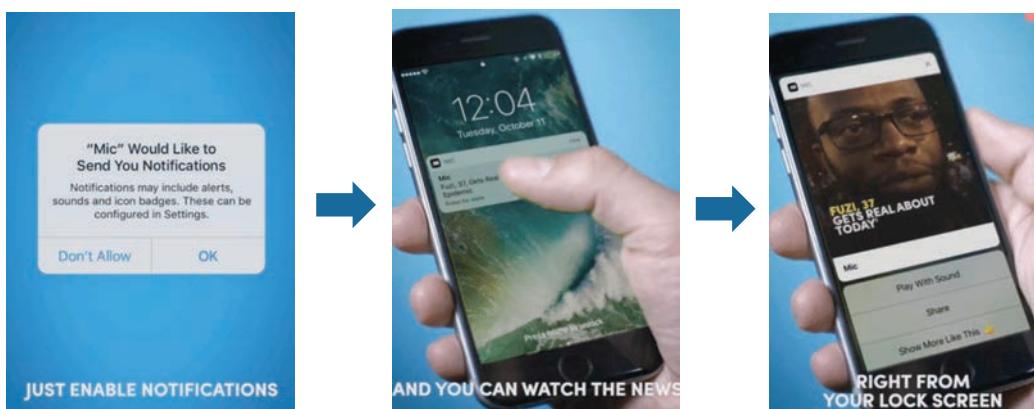
NBC News has started to push photos, maps, and infographics in its notifications. Users could expand the alert, for example, to get a full view of the US election battleground without having to wait for the app itself to open (see Figure 3.3). In a further development, the *Guardian* experimented on election night with alerts on both Android and iOS where live data updates were pushed for the first time to a real-time scorecard on the lockscreen. Over 200,000 people signed up, driving around 800,000 extra clicks to the live blog.⁹

Figure 3.3 Rich media payloads in new iOS 10 notifications



Major league baseball has also started to use the new functionality, sending alerts with video highlights of games embedded in them. Youth-focused Mic.com is also experimenting with video (Figure 3.4).

Figure 3.4 Video notifications direct to the lockscreen



⁸ <http://www.niemanlab.org/2016/06/video-notifications-apple-news-subscriptions-and-other-takeaways-for-publishers-from-apples-wwdc-2016-keynote>

⁹ Personal conversation with Rob Phillips, *Guardian* Product Manager, Nov. 2016.

Wearable Alerts

We are also starting to see alerts delivered beyond the smartphone. Two of those we interviewed were receiving and also valuing alerts on a smart watch:

It is even cooler to receive a push notification, knowing what's happening, being up to date. That is even more convenient, you don't need to get your phone out, I think that's great. The smart watch is very good for that. (German respondent - uses Samsung Gear)

Because I've got an Apple watch I tend to get most of my notifications on my watch rather than on my phone. (UK Respondent - uses Apple Watch version 1)

On a watch, notifications trigger a slight vibration on the wrist which allows information to be glanced at but there is no possibility to click through to more content. News organisations have been experimenting with snackable content specifically for the watch but the small number of users has not made it worth devoting too much effort to so far. Over time, however, the wearable sector could become a far more important part of the picture with new ways of triggering and displaying different kinds of alerts.

4. Conclusions and Recommendations for Publishers

The development of both the content and the technology for notifications is moving at an extremely rapid pace. It is likely that the Android and Apple notification platforms will be every bit as important for the news industry as Facebook Instant Articles, Google AMP, and Snapchat Discover have already become. The role of the lockscreen as a gateway to content has been talked about for many years but only now are we seeing the ease of use and range of functionality begin to meet those expectations.

This research shows that the majority of smartphone users (69%) have downloaded at least one news app, but only 20% are using news apps on a weekly basis.¹⁰ This mismatch essentially shows the problem of visibility faced by news organisations but also the potential for this functionality to close that gap. Carefully targeted alerts may be able to bring audiences back more regularly, and help build a deeper relationship with loyal users that may eventually translate into advertising or subscription revenue.

In our survey almost half of smartphone users who are not currently using news alerts say they might be interested in the future. A combination of more prominent interfaces, better targeting, the growing importance of mobile in general and the popularity of alerts with younger generations add up to a significant new opportunity for publishers.

Having said that, there are still many uncertainties and obstacles to overcome. As we've seen in this report, many users are extremely wary of being sent irrelevant messages on this most personal device. There is a danger that the opportunity will be killed by bad actors spamming consumers – rather as excessive and interruptive digital advertising has led to consumers to embrace adblockers. There is also no guarantee that publishers have the right skills to seize the opportunity. Smartphone users – particularly casual users who are not loyal to a specific brand - may prefer to get alerts from aggregators or from platforms that can offer a wider range of content and more sophisticated technology to personalise alerts effectively.

There are, however, some clear messages and recommendations for publishers in this research:

1. Convert your own app users

It is striking that only around 50% of app users are currently configured to receive alerts. These are by definition interested in news and loyal to at least one news brand. Finding ways to communicate the benefits of alerts to these users will offer the quickest route to growth, along with promoting app use in general and persuading web users to take advantage of alerts. Given the concerns highlighted in this research about alert overload, communication should focus on reassurance on issues of control and relevance.

2. Personalisation will be key

This research shows that although there is a significant number of people who have no interest in news alerts under any circumstances, many would be interested if alerts were more relevant. This means offering a more granular choice of alerts beyond breaking news and delivering these at the right time and in the right place. This in turn will require a deep understanding of audiences, along with investment in technical solutions that learn about individual preferences based on usage and other signals. This will be important because most users, particularly older groups, tend not to make or change selections manually. However, as discussed above, automated solutions need to be combined with explicit and transparent overrides that allow consumers to control the number and timing of alerts.

¹⁰ The 20% figure comes from data collected from the *Digital News Report 2016*, and is an average of US, UK, and Germany.

3. Map out a clear strategy for the lockscreen

Developing a strong news app habit will be a clear advantage as notifications become more central, but this will not be an option for all news organisations given the cost of maintenance and problems of discoverability. As the Guardian Innovation Lab has shown, however, there are many other ways to the lockscreen. On Android devices it is possible to deliver alerts using the Chrome browser and manage sign ups via a mobile news website. Other publishers are experimenting with third-party apps like Facebook Messenger, WhatsApp, Line, or Apple News and delivering alerts through these platforms. All these third-party options involve compromises but they will be worth evaluating to understand which fits particular objectives and business models best.

4. Take advantage of emerging formats

Insights from our research suggest that smartphone users often want more than a headline but less than a full article. They certainly don't want to wait for several seconds for an app to load when they have just a few seconds to take in information. Some of the new alert formats introduced by platforms over the last year offer opportunities to push rich media in a way that plays instantly and natively and even allows news interactions on the lockscreen itself. These rich 'mobile moments' are likely to become the norm over the next few years and it will be important to experiment and learn from these new opportunities.

5. Experiment with tone and style

We are still in the early stage of mobile notifications. While factual headlines are valued by many, there are signs in our interviews that around personal passions and niches there is an opportunity to be more playful with the tone and type of alerts. As BBC Sport have been showing, it may be worth distinguishing between simple push alerts that provide a service and those that are designed to bring users back to something more substantial.

This research has only scratched the surface on a subject that is likely to gain much more attention in the years to come. There is more we need to know about user expectations, about whether alerts drive deeper or narrower engagement with the news and about whether publishers, platforms, or aggregators will ultimately benefit most.

But with the smartphone fast becoming the main device for digital access, the battle for the lockscreen is set to intensify in the years to come.

References

- Newman, N. 2016. *Media Journalism and Technology Predictions*. Oxford: Reuters Institute for the Study of Journalism, Jan. <http://www.digitalnewsreport.org/publications/2016/predictions-2016>
- Newman, N., Fletcher, R., Levy, D. A. L., and Nielsen, R. K. 2016. *Digital News Report 2016*. Oxford: Reuters Institute for the Study of Journalism. <http://www.digitalnewsreport.org>
- Techcrunch 2015. Consumers spend 85% of time in apps but only 5 see heavy use. <https://techcrunch.com/2015/06/22/consumers-spend-85-of-time-on-smartphones-in-apps-but-only-5-apps-see-heavy-use>
- University of Texas at Austin. 2016. *Engaging News Project: Mobile News Notifications*. Austin, TX: Annette Strauss Institute for Civic Life. <https://engagingnewsproject.org/research/mobile-news-notifications>

RISJ PUBLICATIONS

DIGITAL NEWS PROJECT REPORTS

Journalism, Media and Technology Predictions 2016
Nic Newman

Editorial Analytics: How News Media are Developing and Using Audience Data and Metrics
Federica Cherubini and Rasmus Kleis Nielsen

Public Service News and Digital Media
Annika Sehl, Alessio Cornia, and Rasmus Kleis Nielsen

What's Happening to TV News?
Rasmus Kleis Nielsen and Richard Sambrook

Online Video News
Antonis Kalogeropoulos, Federica Cherubini, and Nic Newman

Digital News Report 2016
Nic Newman, Richard Fletcher, David A. L. Levy and Rasmus Kleis Nielsen

Private Sector Media and Digital News
Alessio Cornia, Annika Sehl, and Rasmus Kleis Nielsen

Asia-Pacific Supplementary Digital News Report 2016
Kruakae Pothong and Rasmus Kleis Nielsen

The Rise of Fact-Checking Sites in Europe
Lucas Graves and Federica Cherubini

News Alerts and the Battle for the Lockscreen
Nic Newman

DIGITAL NEWS PROJECT REPORTS - FORTHCOMING

Digital-born News Media in Europe
Tom Nicholls et al.

Journalism, Media and Technology Predictions 2017
Nic Newman

Beyond the Article
Kevin Anderson

Change Processes in Public Service Media
Annika Sehl

SELECTED RISJ BOOKS

(published jointly with I.B.Tauris)

Journalism in an Age of Terror
John Lloyd

*Media, Revolution, and Politics in Egypt:
The Story of an Uprising*
Abdalla Hassan

*The Euro Crisis in the Media: Journalistic Coverage
of Economic Crisis and European Institutions*
Robert G. Picard (ed)

*Local Journalism: The Decline of Newspapers and
the Rise of Digital Media*
Rasmus Kleis Nielsen (ed)

*The Ethics of Journalism: Individual, Institutional and
Cultural Influences*
Wendy N. Wyatt (ed)

*Political Journalism in Transition: Western Europe in
a Comparative Perspective*
Raymond Kuhn and Rasmus Kleis
Nielsen (eds)

*Transparency in Politics and the Media:
Accountability and Open Government*
Nigel Bowles, James T. Hamilton, David A. L. Levy
(eds)

*The Media, Privacy and Public Shaming: The
Boundaries of Disclosure*
Julian Petley

SELECTED RISJ CHALLENGES

(published jointly with I.B.Tauris)

*The Right to Be Forgotten: Privacy and the Media in
the Digital Age*
George Brock

*The Kidnapping of Journalists: Reporting from High-
Risk Conflict Zones*
Robert G. Picard and Hannah Storm

Innovators in Digital News
Lucy Küng

*Journalism and PR: News Media and Public
Relations in the Digital Age*
John Lloyd and Laura Toogood

*Reporting the EU: News, Media and the European
Institutions*
John Lloyd and Cristina Marconi

*Climate Change in the Media: Reporting Risk and
Uncertainty*
James Painter

Women and Journalism
Suzanne Franks

Transformations in Egyptian Journalism
Naomi Sakr



Reuters Institute
for the Study of Journalism

reutersinstitute.politics.ox.ac.uk digitalnewsreport.org

Supported by

