

# The Aftermath of Mobilegeddon

## A Study on the Mobile Web

Appticles performed two time-lapsed studies that looked at the state of web development targeting mobile devices across a vast swathe of the marketplace, providing insights into how mobile support operated before Google's algorithmic change, the reaction of companies after the change, and the potential impacts of future changes on development methods. To help you understand the implications of the compiled data, this white paper covers the history of mobile device usage, the methodology of the surveys, and how to interpret the results in a way that guides your mobile strategy into the future.

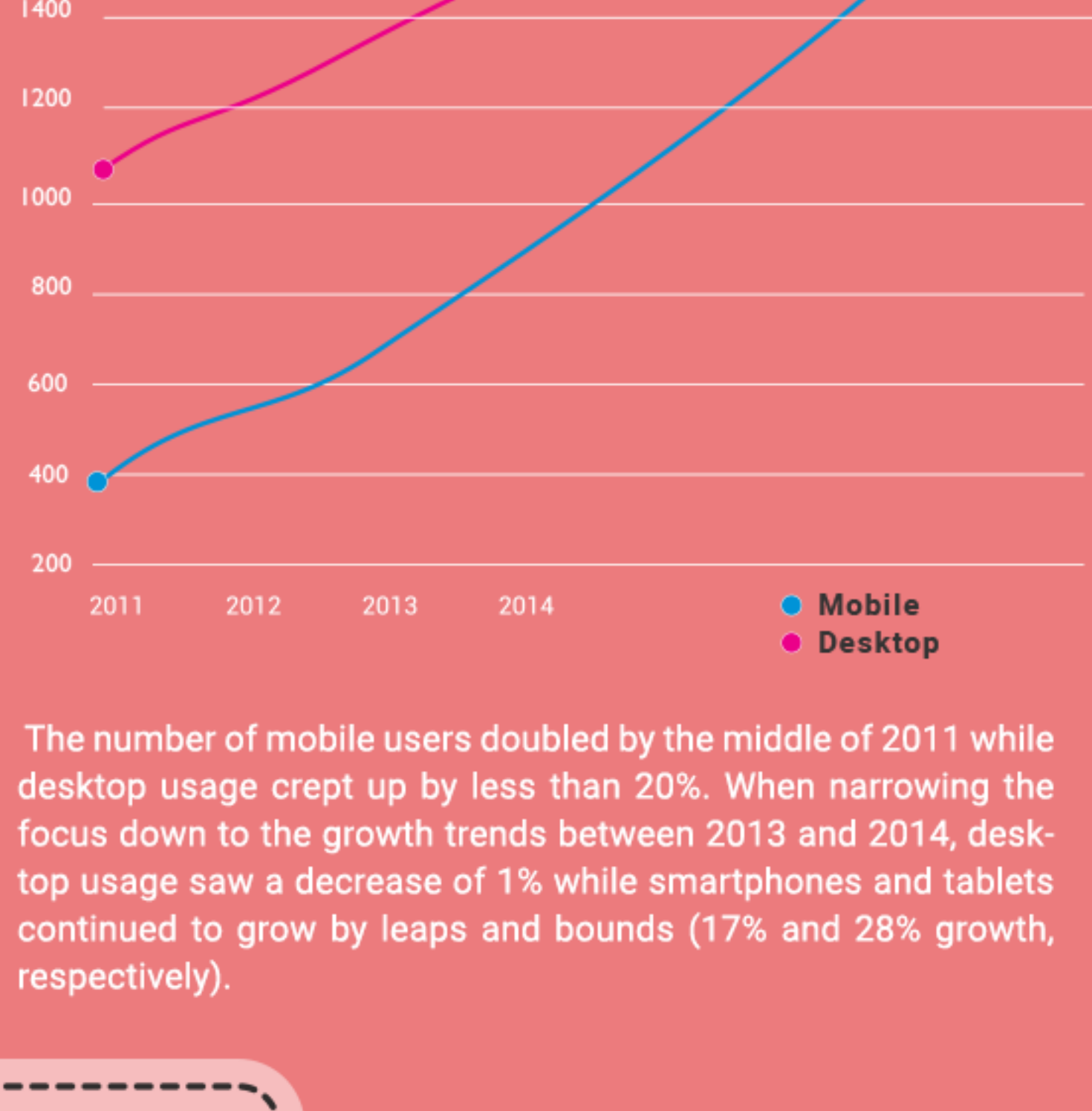
Presented by Appticles.com

### Mobile takes Flight

Technology was finding increasing importance in the lives of people through the end of the 20th century, but it was still tethered to bulky and cumbersome pieces of equipment. The smallest devices - cell phones - were rudimentary devices that could send basic text and audio messages. Laptops were prohibitively expensive for anyone who wasn't an enthusiast, and their capabilities were limited by weaker performance than desktops and still needing a tether to the grid if you planned on using the Internet or working for more than an hour or two.

The release of 3G and 4G networking technologies combined with smaller, better performing devices to make using mobile devices as a primary form of Internet access more palatable for consumers. Mobile devices became as essential to people's everyday equipment as a wallet or purse, with over 90% of young adults carrying one at any given time.

The signs that the mobile web would overtake desktop access were clearly in the data as far back as 2008. At that time, there were roughly 600 million mobile users to the 1.2 billion desktop users, but the growth of mobile adoption was greatly surpassing new desktop users.



The number of mobile users doubled by the middle of 2011 while desktop usage crept up by less than 20%. When narrowing the focus down to the growth trends between 2013 and 2014, desktop usage saw a decrease of 1% while smartphones and tablets continued to grow by leaps and bounds (17% and 28% growth, respectively).

Of the 90% of adults of all ages who own a smartphone, 60% use their device regularly to access the Internet. That's just 25% less than the rate at which they use them for sending text messages and a staggering 300% more than the rate of usage for traditional voice calls. Despite the release of over 3 million applications on just the two most popular marketplaces, most users tend to rotate through a few apps for specific interests while using a mobile browser for the majority of their other digital media. Gaming and social media apps dominated the time of users in a 2014 study with 32% of their time spent on games and 28% being divided between Facebook, Twitter, and other social apps. General website browsing accounted for 14% of the time spent, but it also made up more than twice the amount of website traffic compared to dedicated applications.

# 28%

OF THE USER'S TIME IS DIVIDED BETWEEN FACEBOOK, TWITTER, AND OTHER SOCIAL APPS

## The Beginning of the End of the First Internet Era: Mobilegeddon

In 2015, the power of mobile devices could no longer be ignored. Google released an update to its algorithms on April 21 that gave a higher search score to web pages for fulfilling various benchmarks of mobile browsing support. Because of its impact on the search rankings of any website that wanted to reach mobile users, it was colloquially dubbed "Mobilegeddon", an allusion to the final battle between good and evil in Christian lore.

The guiding principle behind the update was to improve the experience of mobile users on Google by ranking sites that load and operate more efficiently on their devices. The 2015 update to the Google algorithm was targeted specifically at search results for mobile device users, leaving the page rankings unchanged for searches coming from desktops and devices with larger screens. This gives both types of users the optimal experience when searching through Google, which is the search engine's primary goal.

It should be noted that mobile friendliness alone was just an addition to the algorithm, not a complete supplanting of all the work Google has done to detect websites with quality content. A website that has a version designed for mobile web browsing will get a bump in its rankings on a mobile user's search, but pages with more robust and useful content will still come up sooner.

## The Four Methods of Approaching Mobile Interaction

Google divided the primary methods of mobile support into four categories: failure to incorporate, mobile applications, adaptive programming, and responsive web design. Each of these categories was divided further according to Google's recommendations, separating them based on their impact on core website functionalities such as the Uniform Resource Locator (URL), the link typically seen in the address bar, and the HTML code that carries information to the user's browser which is then displayed as the web page.

One final method of approaching mobile users - applications - is a viable strategy for engagement, but they serve a different role than general web content. Google does have an application-based method of indexing mobile application content and providing access to app-only content through virtual machines running the app. Mobile users tend to only use a handful of applications, most relying on just five, and application downloads tend to come from existing clients, not new ones. Dedicated applications are a fantastic way of providing a better experience to returning customers and clients, but they are an addition to a mobile compatible website, not a fully-fledged alternative.

1

### Failure to Incorporate Mobile Devices

It may seem a bit odd to consider the abject absence of mobile development as one of the methods in use, but the unfortunate reality is that it is a common strategy even amongst successful businesses who have IT departments and a notable web presence. The page's URL and HTML transmissions will remain exactly the same for mobile users as they do for those on a traditional computer, leaving it up to the mobile browser to parse the website into a legible and navigable page for the user.

2

### Mobile-Friendly Service

The basic operation of a mobile friendly web page is to first detect whether or not the user is on a mobile device. If so, the browser is redirected towards a separate URL that contains code specifically designed for mobile users. Because the URLs are different, the website can cause slight confusion for browsers when a link pointing to the website version is unintentionally visited by the user. Functionally, mobile-friendly sites can perform equal to other methods with the proper configuration.

3

### Adaptive Programming

Adaptive programming, also known as dynamic serving, works by generating the HTML code based on the browser being used. This reduces the amount of data sent over the connection to that which the user's device can display, improving responsiveness while providing the mobile user with a streamlined experience.

4

### Responsive Web Design

The most advanced method of responding to mobile users is known as Responsive Web Design (RWD). At a glance, it may seem like there is no difference between "responding" and "adapting" to mobile users, but it does play out differently in the details. RWD takes the HTML content of the web page and modifies it to fit the screen size of the intended device. The HTML for RWD results in typically larger page sizes, but the intelligent design counteracts the impact on display times.

## Methods and Results of the First Web Survey

PERIOD: APRIL 21, 2015

To understand the impact of the changes, the original survey was conducted before the April 21, 2015 implementation of the mobile-focused adaptations. Appticles' surveys on mobile web page development were directed at 10,000 of the top websites per the rankings by Alexa, a web analytics service that is owned and operated by Amazon. These web entities were subdivided into categories based on the primary field of the businesses operating the site, resulting in these categories: Tech, News, Business, E-Commerce, and Sports. Pages were then assessed according to the type of mobile support they offered, discussed above, and three additional metrics: height, size, and speed.

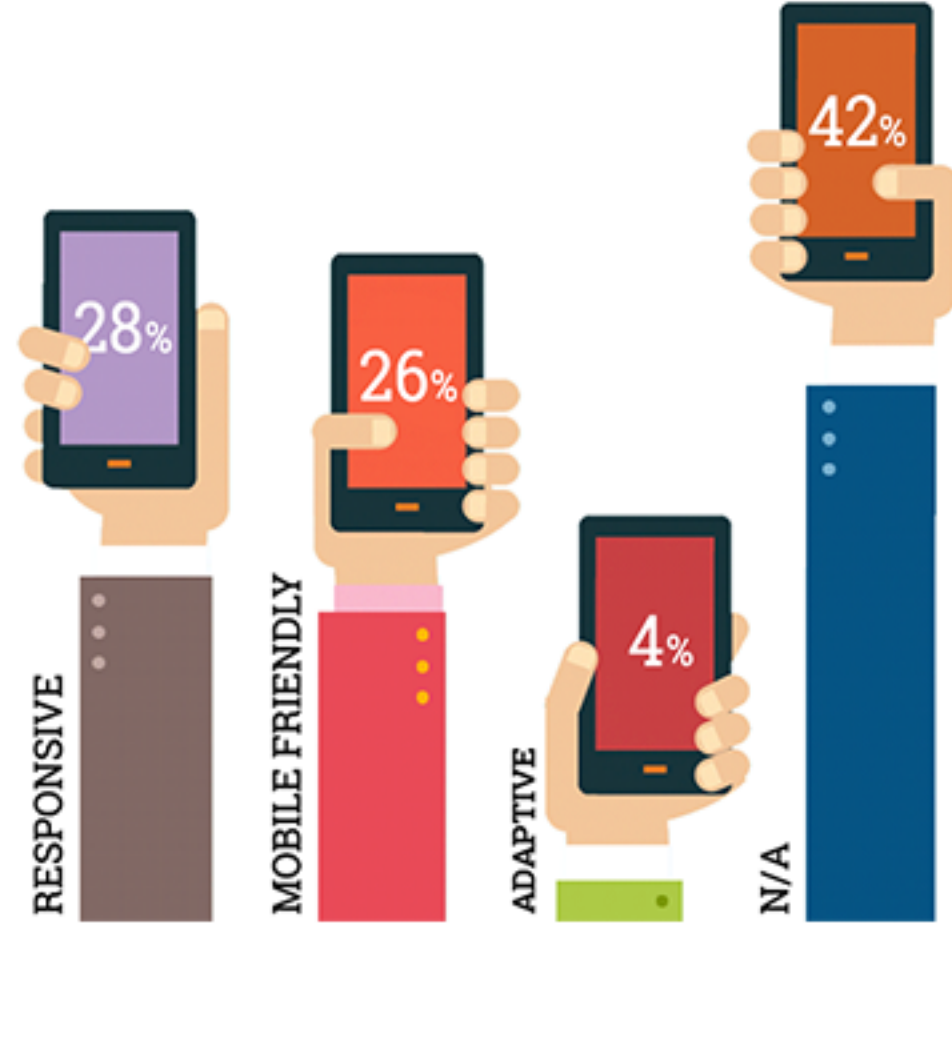
Pages optimized for viewing on a mobile device typically work by condensing the width of a page and extending its length to fit the narrower, shorter screens. For the purposes of the survey, the unit of height is the same as that of the iPhone 6; a height ranking of X2 corresponds to a page twice the size of its screen, while a X4 screen is four times the size, and so forth. Shorter pages are typically easier to parse for mobile users, but a large page height isn't as detrimental as an unresponsive and bulky website.

Size refers to the amount of digital space the HTML content of the page occupies, measured in Megabytes. Because of the wireless 3G and 4G networks being the primary source of mobile Internet access, pages with smaller HTML packages are especially important.

For speed, Appticles utilized the PageSpeed Insights (PSI) system created by the Google Developers team. PSI tests the mobile and desktop versions of pages separately, awarding each a score from 0 to 100 based on the page responsiveness. It should be noted that the responsiveness test primarily considers the page elements that appear Above the Fold (ATF), ignoring the elements that would load out of sight while the user is viewing the first section.

## Overall Results Prior to the Algorithm Change

The adoption of mobile support was present in the majority of surveyed content publishers, but that belies the issue of 42% of the highest ranking pages having no mobile support at all. Adaptive is by far the least represented strategy, being used by just 4% of the surveyed sites. RWD and mobile-friendly were relatively even at 28% and 26% respectively.



## By Business Category

### Tech

As might be expected, tech sites catering to savvy users were better prepared for the onset of Mobilegeddon than most other company types, but there was a shocking surplus of sites that had no mobile setup whatsoever. 51.46% of the surveyed sites were lacking in mobile support for a 22.52% increase when compared to the overall levels. The tech content publishers who did support mobile devices were more likely than any other group to use RWD with nearly a third of all the entities adopting the strategy.

### E-Commerce

Although the PSI scores for business sites were lower on average for E-Commerce sites as compared to their Tech counterparts, the amount of deviation from the average was significantly lower, pointing to an overall better experience when using them whereas Tech sites varied wildly. The most standout finding for E-Commerce sites was the high concentration of sites using adaptive web design (6.06%). The average page heights were the lowest at X5 for RWD, X4 for adaptive programming, and a best-in-class X2.5 for mobile-friendly versions.

### Business

Business-focused websites were less likely than the average to have no form of mobile support, but they otherwise fell along the overall trends. The average PSI scores hovered between 50 and 53 for all three mobile implementations. The slight preference for mobile-friendly sites is indicative of the slower adoption of new technology in the field.

### News

News sites were the most likely to use a dedicated mobile-friendly version of their website. Only 31.38% had no mobile support. Despite their willingness to embrace mobile users, the average PSI scores were the lowest, the page sizes were the highest, and page heights surged as high as X10. The lack of performance despite their adoption of Google's recommendation for RWD points to a failure to properly follow said recommendations, resulting in performance hits that wouldn't plague a simpler redirection to a mobile-friendly site.

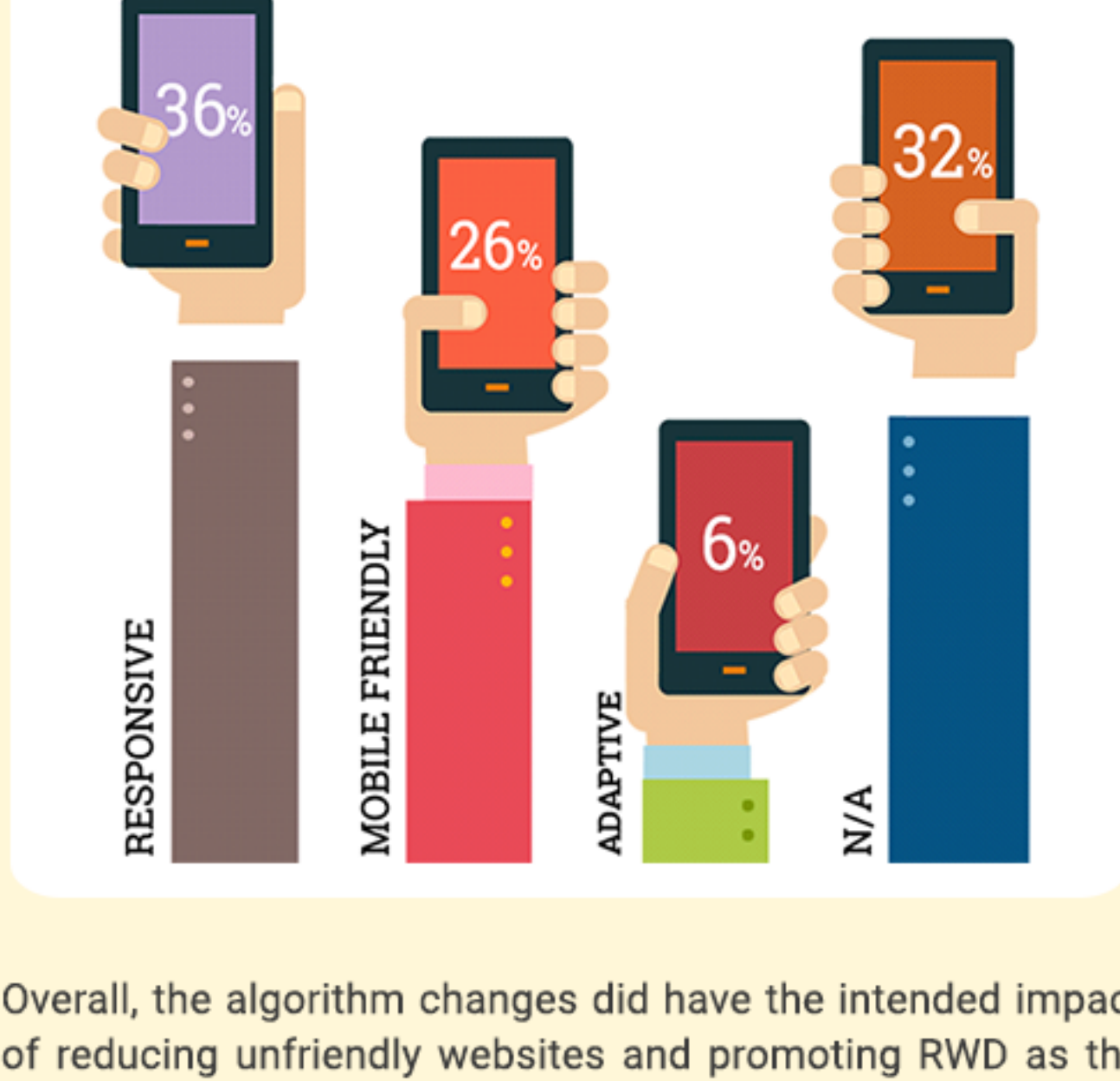
### Sports

Sports sites roughly followed the overall trends with a chunk of the mobile-friendly percentages being divided between null support and adaptive programming. An average PSI score of 46 and page size of 3.87 MB on sites using RWD was the worst usage of the technology, highlighting how improper utilization of RWD can result in a degradation of performance.

## The Aftermath of Mobilegeddon

Because no snapshot in time will paint a complete picture, Appticles revisited the earlier study eight months after the implementation of the algorithm updates. Mobilegeddon was not an unexpected catastrophe, but it marked a cataclysmic shift in how many web content publishers were approaching their support for mobile devices.

Notably, of the 42% of web entities who had no support for mobile devices, a quarter of those had adopted a mobile strategy of some sort. This still left a sizable chunk - 31.5% of the total sample - failing to keep pace with the technology of their users. The downward shift in full compliance was inversely mirrored by an increase of 8.56% in sites using RWD. Mobile-friendly website usage remained mostly static with a 0.34% increase. Adaptive programming saw a 1.12% jump, but that represents a more significant hike than it would in other categories. The average PSI scores increased dramatically with 30% more sites achieving a score above 60. Page sizes increased, likely due to the growth of RWD's popularity, but mobile users still saw an improvement in performance thanks to the shift in design paradigm. The average page height for all mobile sites moved to 6.77.



Overall, the algorithm changes did have the intended impact of reducing unfriendly websites and promoting RWD as the go-to mobile support scheme with the adoption of a site using adaptive programming or having a mobile-friendly version providing lesser alternatives based on the needs of the entity and the capabilities of their IT team. With regards to Alexa's popularity rankings, there was little movement as Alexa does not factor mobile accessibility into its equations.

The E-Commerce sites were the most eager to adjust to the new search metrics. By December, 71% had a mobile presence of some sort for a 31% increase over the previous survey.

News sites saw one of the most unusual shifts. Instead of a general surge in mobile support, the news sites that already catered to mobile users became 530% more likely to have a mobile application available for download. News media sites tend to have dedicated users, explaining why they opted for a mobile strategy that specifically enhances the experience of returning clients even though users spend 85% of their time on just a few of their favorite apps. Business and sports sites also continued to show a love for dedicated applications.

## Looking to the Future

Google is not prone to sitting on its search algorithms for too long, so the rush to adopt mobile-ready website design is expected to grow exponentially into 2016 and beyond. A 25% drop in the number of top sites without a mobile version in just the eight months after Mobilegeddon shows a hunger for mobile content that goes beyond the shift in the math of one search engine.

This will place those companies who lack such a design further behind their competition, creating a feedback loop of more motivation to adopt a mobile strategy.

Google also spent \$25 million to secure exclusive rights to the .app domain from ICANN in a competitive bidding war against other tech giants. This will allow Google to license out .app domains to content providers and further blur the line between whether content is a site or an application. You can expect there to be both native and web-based applications behind the .app domain once Google rolls out its domain registry service, taking technology to a new realm of application.

Instead of simply reacting to the changes in technology and how companies like Google influence it, a modern business needs to push itself ahead of the curve. To prepare your company for the ongoing shift to a more mobile world, Appticles is primed for assisting small and medium web content publishers. Appticles' mobile publishing platform is engineered to bring your mobile support up to date and prepare it for the inevitability of these future changes. To start, Appticles will help create a mobile web application that amplifies your page's presence in the lives of your clients.

### REFERENCES

<https://www.appticles.com/blog/2015/06/state-of-the-mobile-web-4-out-of-10-sites-are-oblivious-to-googles-new-mobile-ranking-signal/>  
[http://www.pewinternet.org/files/old-media/Files/Reports/2011/PIP\\_Smartphones.pdf](http://www.pewinternet.org/files/old-media/Files/Reports/2011/PIP_Smartphones.pdf)  
<http://www.pewinternet.org/fact-sheets/mobile-technology-fact-sheet/>  
<https://www.comscore.com/Insights/Blog/Mobile-Internet-Usage-Skyrockets-in-Past-4-Years-to-Overtake-Desktop-as-Most-Used-Digital-Platform>  
<http://www.businessinsider.com/best-smartphones-of-the-year-2011-12?op=1>  
<https://searchengineinsider.com/seo/opinion/2353616/mobile-now-exceeds-pc-the-biggest-shift-since-the-internet-began>  
<https://googlewebmastercentral.blogspot.com/2015/04/rolling-out-mobile-friendly-update.html>  
<http://www.statista.com/statistics/276623/number-of-apps-available-in-leading-app-stores/>  
<https://developers.google.com/speed/docs/insights/mobile>

appticles

Devonshire House, 60 Goswell Road, London, EC1M 7AD.  
+44 20 3286 3752 (UK) | +1 314 930 5415 (US)  
contact@appticles.com