

2018

SEARCHMETRICS

WHITEPAPER



 searchmetrics

A close-up photograph of a person's hands holding a black smartphone. The person's right hand is at the bottom, holding the phone, while their left hand is positioned above it, with fingers slightly curled as if about to interact with the screen. The background is a blurred, light-colored surface with some faint green markings. The overall lighting is soft and even.

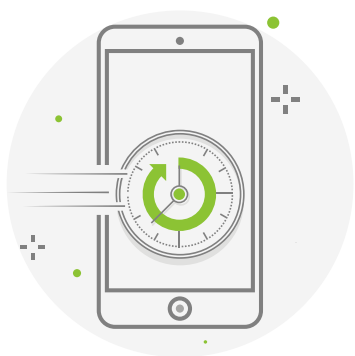
MOBILE SPEED STUDY

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Purpose of the Study

For marketers, 2018 is the year of mobile search, with Google beginning the roll-out of its mobile-first indexing in March and confirming page speed's influence as a mobile ranking factor from July. Online marketers will only succeed if they understand mobile-specific features of search engine optimization. The analysis in this Searchmetrics whitepaper focuses on two such features, both of which are highly relevant in 2018:



Mobile Page Speed



Accelerated Mobile Pages (AMP)

The findings of this study will aid marketers in their mobile optimization efforts by:

- revealing the relationship between mobile page speeds and Google rankings
- highlighting where most value is to be gained from site speed optimization
- demonstrating the specifics of page speeds in the industries of eCommerce, finance, health, media and travel
- showing how widespread the use of AMP is across different industries
- analyzing the data to show which kinds of AMP optimization are most relevant in each industry

Mobile Speed Study 2018: A Searchmetrics Whitepaper

It is Searchmetrics' mission to enable ever-increasing transparency for the modern marketer. A big part of this mission is conducting analyses into the state of search and content marketing, from SEO ranking factors to best practices and content strategies. Data and analyses can be accessed in the [Searchmetrics Knowledge Base](#) and on the [Searchmetrics blog](#).

Background: Mobile Search in 2018

Mobile search has been on the rise for several years, but 2018 is the year where mobile without a doubt has become the new standard for web search.

Mobile Page Speed as a Ranking Factor from July 2018

In January 2018, [Google announced on its webmaster blog](#) its Speed Update, making page speed a ranking factor from July 2018. This is a significant statement, as Google is normally extremely coy about its ranking algorithm, and usually prefers to refer to less tangible factors like “relevance” or “awesomeness”. If Google is promoting a ranking factor this openly, then it certainly makes sense to pay attention.

As Google makes clear in its blogpost, this emphasis on page speed is part of its push towards encouraging developers to focus on user experience. With page speed playing such a central role in Google’s assessment of user experience, Searchmetrics decided to conduct an analysis of the relationship between page speed and Google rankings. The results are presented in this whitepaper.

Mobile-First Indexing and AMP

The fact that page speed is becoming a ranking factor (only) for mobile searches does not diminish its importance. In March 2018, [Google confirmed](#) that it had (finally) begun its switch to mobile-first indexing, meaning that a page’s mobile version is considered most important when assessing it for rankings. Globally, more searches are made on mobile than desktop and so it is only logical for Google to prioritize users’ mobile needs.

As mobile becomes the primary form of search, mobile-specific initiatives grow in importance. One of the biggest is Accelerated Mobile Pages (AMP), a framework for building lean, lightning-fast pages for mobile devices. In its early days, AMP was primarily used by news sites, but the uptake of the framework has since spread into all corners of the internet. An investigation into AMP and its relevance in different industries makes up the second part of this whitepaper.

Synopsis: Executive Findings and Conclusions

This page summarizes the main findings of this paper.

- 1.** Across all industries, there is a strong connection between mobile page speed and Google ranking amongst pages ranking on positions 1 to 5 in the search results. Near the top, pages load faster with each improvement in ranking position.
- 2.** Mobile pages ranking on positions 1 to 5 load faster than those ranking 6 to 15.
- 3.** If optimizing a page's speed, significant benefits are only likely if a page can be optimized to load in under two seconds.
- 4.** Improvements to mobile page speed at the slower end of the spectrum, e.g. from six to five seconds, are unlikely to have much impact.
- 5.** Mobile page speeds do go up and down a bit across industries, but the general trend is much the same across the board: Top 5 results are faster than 6 to 15.
- 6.** Across all industries, Accelerated Mobile Pages are found on the first results pages for three out of five (61%) keywords.
- 7.** AMP is most common in media (87% of keywords), but is also found on over half of SERPs in finance, eCommerce and travel.
- 8.** AMP results are least common in the health industry, appearing on the first search results page for just 35% of keywords.
- 9.** Of all the different types of AMP integration, organic AMP pages are the most common, appearing for 47% of searches.
- 10.** AMP carousels are still primarily found in media, where 36% of results include a mixed carousel and 14% a publisher carousel.

Study Methodology – Measuring and Defining Page Speed

Before diving into the results of our analysis, it is necessary to establish two points:

Measuring Site Speed

Measuring the speed of websites is an imprecise science at the best of times. Internet connections vary enormously, even within a designated standard like 3G or LTE. Furthermore, numerous factors along the connection between searcher and server can affect how long a page takes to load for a particular user at a particular time.

Therefore, if you are measuring the speed of your pages and those of your competitors, then bear in mind that you will likely get different results, as they will always depend on the connection being used.

In all cases, when testing page speeds, it is important that the connection is used is stable so that the speeds of different pages can be compared with one another. This study was conducted using a stable, high-speed connection.

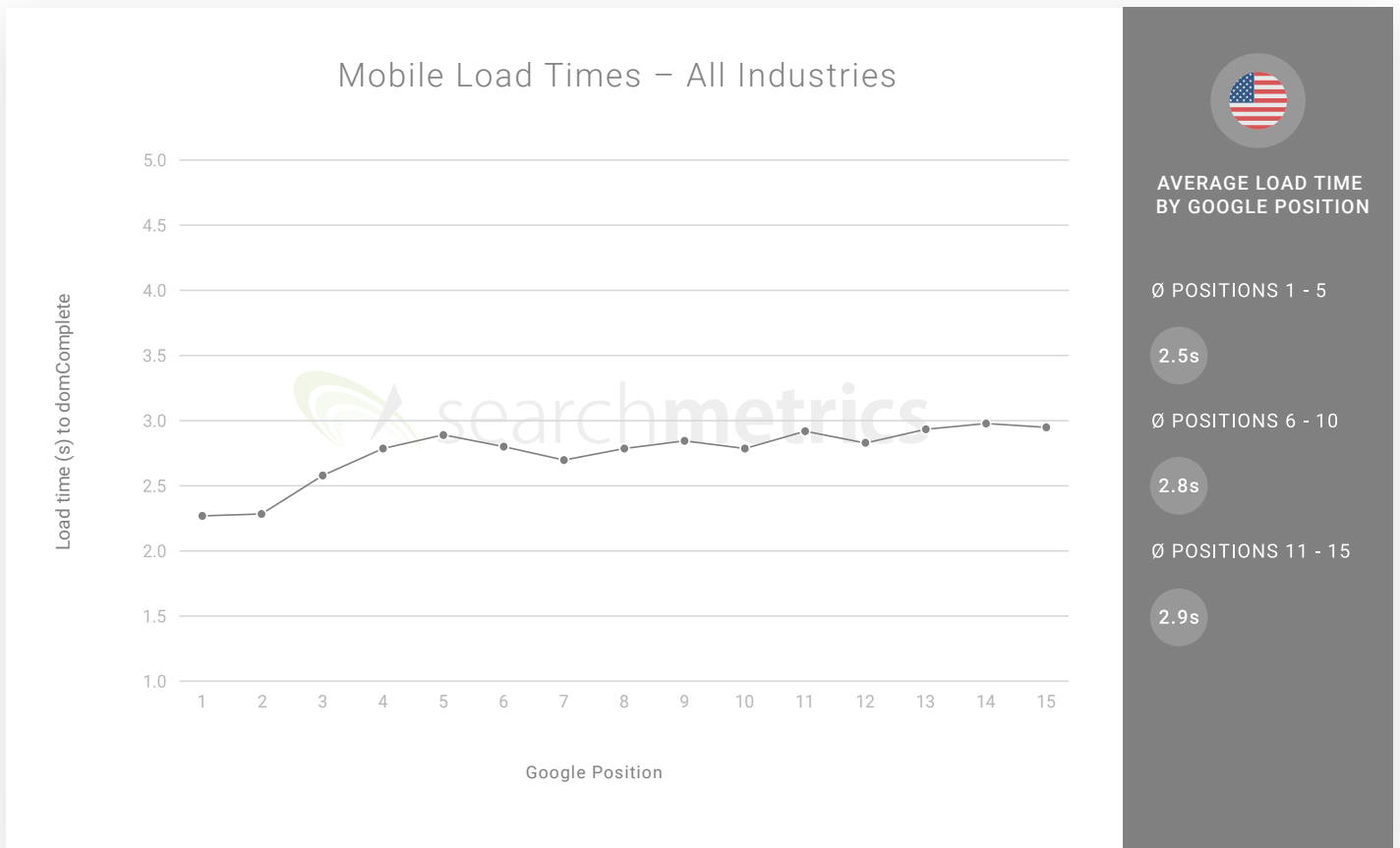
When is a Page loaded?

There are several definitions of what it means for a page to be loaded. Common metrics used include the time to first byte, first meaningful paint and first interactive. Popular providers of page speed tools include Google Lighthouse, Webpagetest, Pingdom or GTmetrix.

For any analysis of page load times, the most essential factor is that a consistent approach is taken to ensure that results are comparable. For this study, load time is defined as the time from sending the first request to the completion of the Document Object Model (domComplete). This is the point when the browser has finished processing the document. More information on domComplete can be found at varvy.com.

Mobile Page Speed – Results

For this analysis, mobile pages ranking for thousands of informational keywords across five different industries were tested. The average load times for pages ranking at positions 1 to 15 in the Google search results are shown in the chart below.



The results do not show a linear relationship across the top 15 positions. The chart is best viewed in two sections:

- **Google positions 1 to 5:** Higher ranking pages load faster.
- **Google positions 6 to 15:** Page speeds remain fairly constant, with no significant relationship between Google ranking and load times.

Whilst pages ranking at positions 11 to 15 are slightly slower than those at positions 6 to 10, the most significant finding from the graph is the difference between pages in the top 5 of Google's search results and those lower down in the rankings.

Mobile Page Speed – Explanations and Interpretations

Interpretation of ranking factors sometimes feels like walking blindly into a minefield. But that's what SEO professionals love to do. This page presents a range of possible explanations of the page speed results, as provided by consultants from The Searchmetrics Digital Strategies Group.

DIGITAL STRATEGIES GROUP



Lukas Krawieczek,

Senior SEO Consultant,
Searchmetrics Digital Strategies Group

Load time is one of the decisive factors for positions at the top of the SERPs.

"As mobile websites become increasingly complex, including the growing use of JavaScript elements and frameworks, load time will definitely remain one of the decisive factors determining the positions at the very top of the SERPs. Interactive elements and frameworks push up the volume of data websites need to load, but users' expectations stay the same. They want a page to be available in a fraction of a second. Websites that ignore this are likely to see a negative impact on their position in the SERPs."

Mobile Page Speed – Explanations and Interpretations



Niels Dahnke

Head of SEO/SEA/Social Media,
[MADSACK Market Solutions GmbH](#)

Google pays particular attention to page speed on the top 3 ranking positions.

„The top 5 positions get over 80% of all clicks, and users tend to click on the first three links in the SERPs. This means that Google pays particular attention to fast-loading pages on these positions. Slower pages with relevant content will generally make it to position 4 and below.“



Felix Oey

Senior SEO Consultant
Searchmetrics Digital Strategies Group

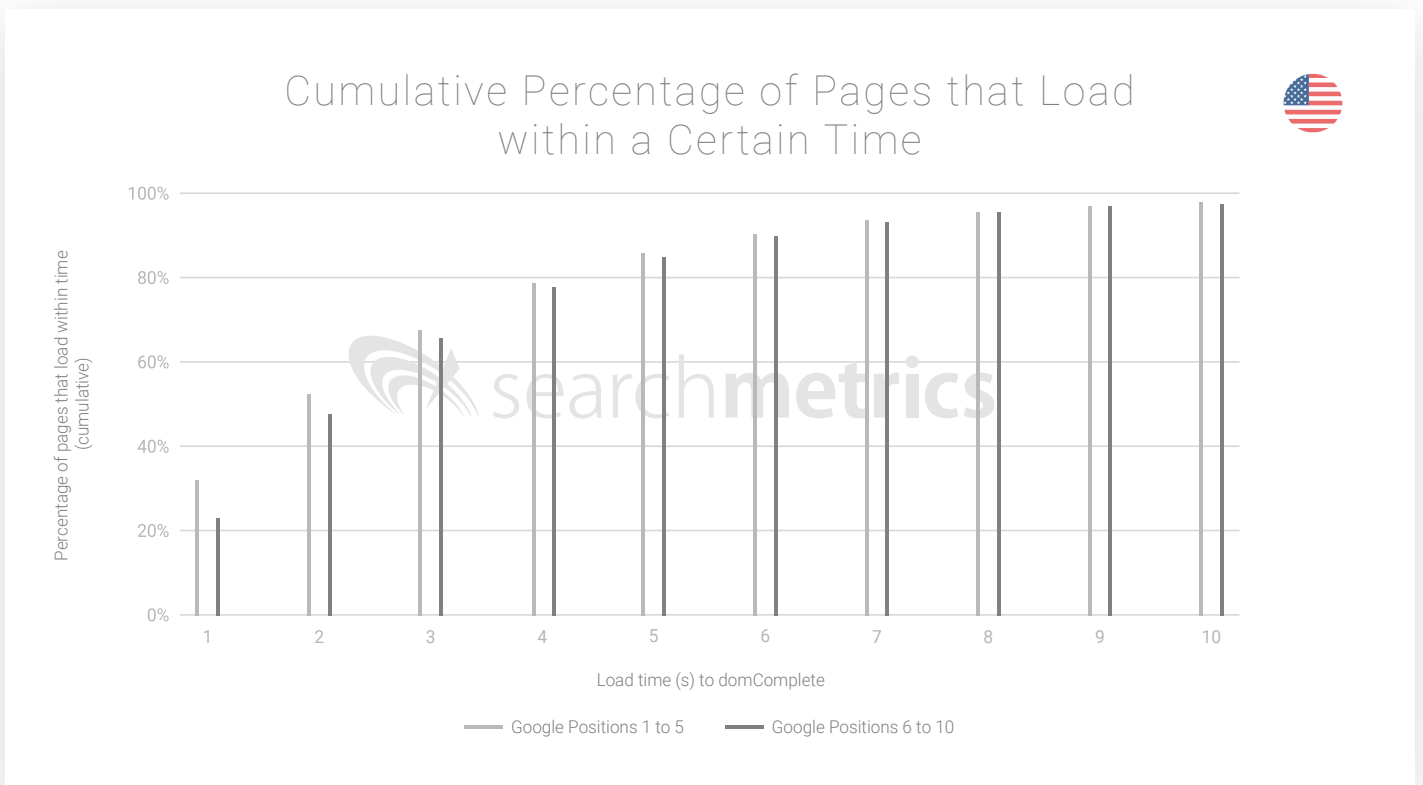
Why should Google rank you highly if you can't even keep up with users' expectations?

“Your mobile load speed is as important as your content quality and good usability. People always expect an instantaneous answer from any mobile page. Why should Google rank you highly if you can't even keep up with users' expectations?”

Optimizing your Site – How fast does fast have to be?

A big part of successful SEO is knowing where your competition stands and where to optimize first. This means setting priorities and understanding where you can achieve the biggest impact for the most efficient output of resources.

To illustrate this in terms of page speed, the following graph shows how many pages on the top 5 Google positions, and how many pages on positions 6 to 10, are loaded within a certain time – i.e. within one second, two seconds, three seconds and so on.



Optimizing your Site – How fast does fast have to be?

This shows that the main difference in load times between pages in the top 5 and those in the lower half of the top 10 comes at the high end of the speed spectrum.

- Almost a third (32%) of pages in the top 5 are loaded within a second, whereas under one in four pages ranked 6 to 10 load this quickly
- Lower-ranking pages catch up quickly; the proportion of top 5 pages only remains significantly higher than those ranked 6 to 10 for pages loading under 2 seconds.
- For pages that load in 5 or more seconds, there is almost no difference between pages ranked 1-5 and those ranked 6-10.

This suggests that if your page ranks 6 to 10 and takes longer than five seconds to load, increasing the speed slightly isn't likely to have much impact. However, if you can get your page loading under two seconds, then you may be able to improve your chance of pushing into the top 5.

Note that these absolute times are based on our tests over a high-speed connection.

AMP

Whilst Google has stated that AMP is not a ranking signal, creating an AMP page is a sure-fire way of ensuring that your mobile content loads extremely quickly. Accordingly, any ranking boost associated either directly or indirectly with page speed will be particularly beneficial for pages built on AMP.

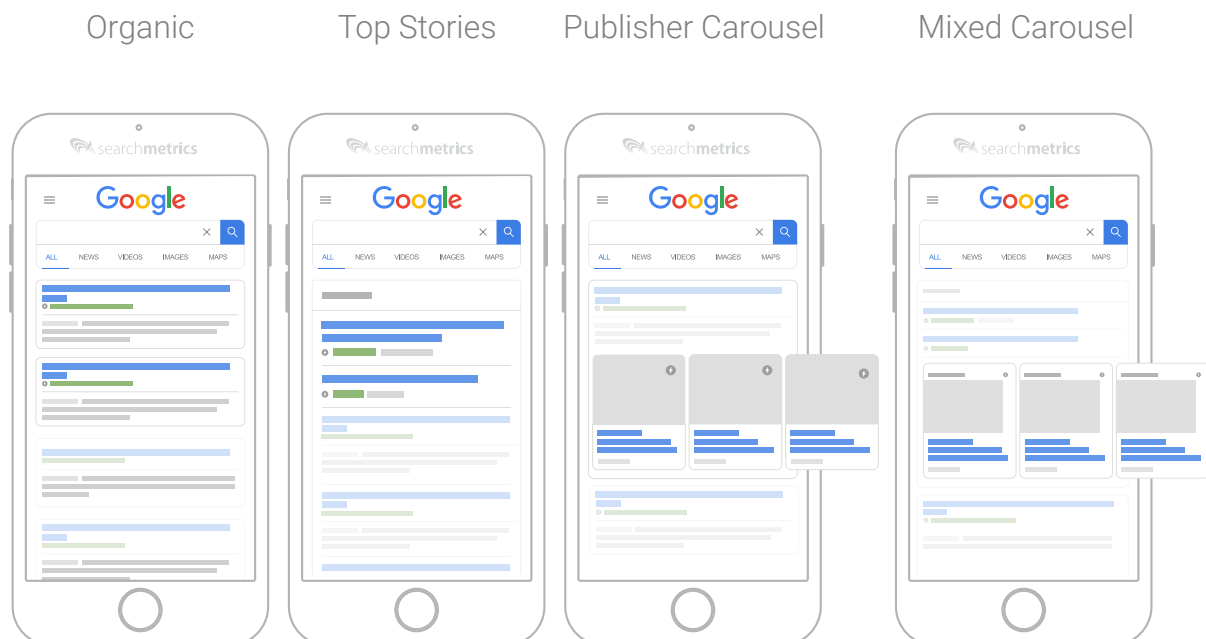
In our analysis, we have investigated how widespread AMP pages are on the whole, and we have broken the results down into four distinct types of AMP integration:

Organic: Otherwise normal search results with link and meta description, but to pages built using AMP. The AMP symbol appears before the link on the SERP.

Top stories: Google News results for AMP pages, shown as a headline link without meta description.

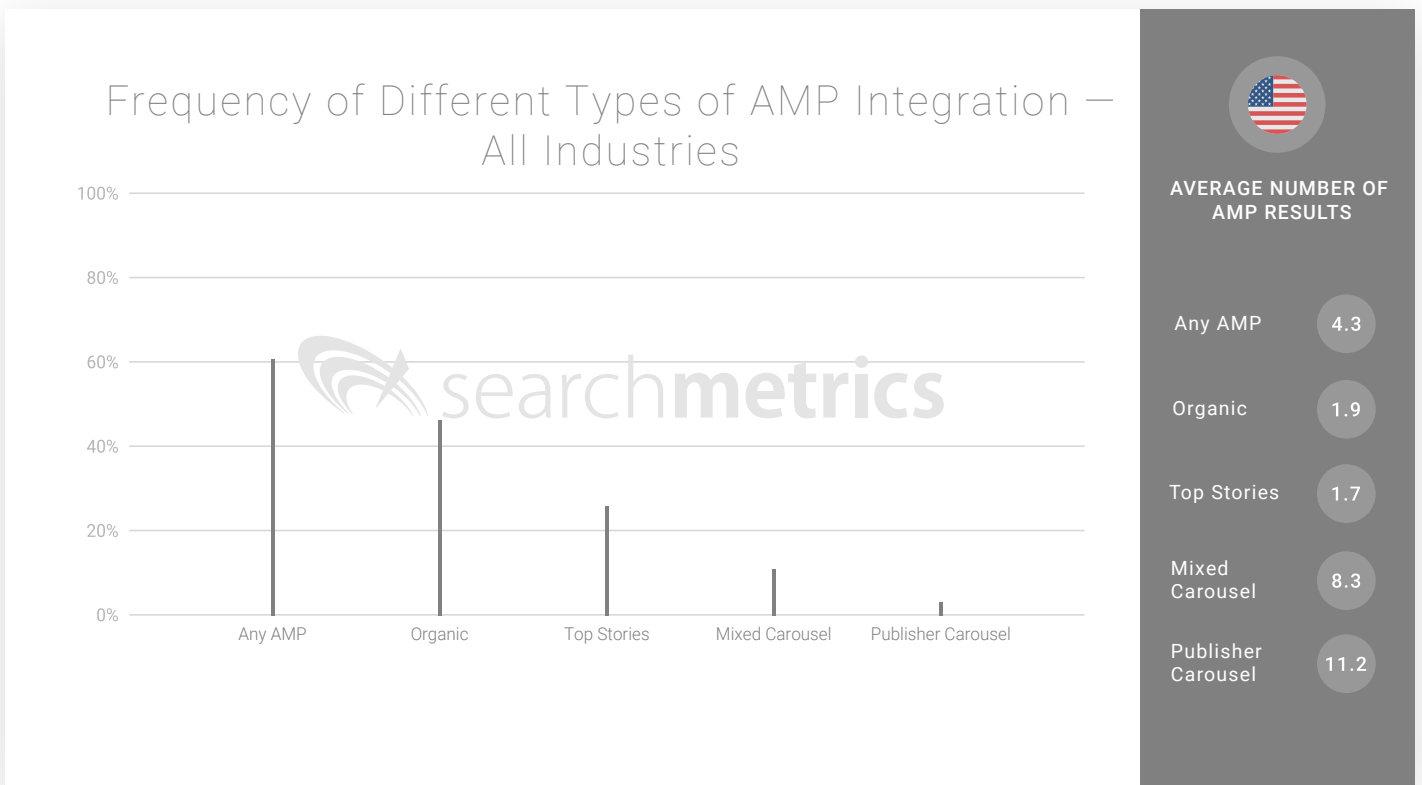
Mixed carousels: News carousels, containing AMP results from several different publishers. Each result includes the publisher's name and logo, an image and a headline.

Publisher carousels: News carousels, containing AMP results from one single publisher. Each result includes an image and a headline.



AMP – Results

The chart below shows how frequently AMP results appear on the first search results page for mobile searches on Google.com, based on the same keyword set consisting of thousands of informational keywords as used to measure page speeds. The bars show how the percentage of keywords for which at least one AMP result of the given type appears. The numbers on the right-hand side indicate the average number of results for each type of AMP integration, when it is displayed.



AMP – Results

The main finding is that AMP results appear on the first search results page for over three fifths – 61% – of keywords. Furthermore:

- Organic AMP results are the most frequent type, appearing for 47% of keywords
- Mixed carousels are found for 11% of keywords, whereas the rate is just 4% for carousels occupied by a single publisher
- AMP top stories are displayed for around one in four searches (26%) and are normally limited to 1 or 2 results

A first SERP with AMP has an average of 4.3 AMP results. This indicates strongly that the use of Accelerated Mobile Pages is no longer limited to news sites and publishers. A more detailed industry-by-industry breakdown of AMP results is given later in this paper.

RESULTS AT A GLANCE – AMP ACROSS INDUSTRIES

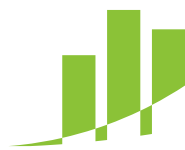
Industry Analysis

As Google’s algorithm becomes more precise, the criteria applied to determine rankings in different industries or topical niches – and even for every search query – can vary considerably.

Having investigated page speed and AMP integrations across all search results, this section of the whitepaper analyzes results at industry level. The following five industries are the subject of this analysis:



eCommerce



Finance



Health



Media



Travel

To gain insight into the specifics of a particular industry, a smaller, more specific keyword set is used than for the overall investigation, in this case consisting of 500, rather than 2,500 keywords. To ensure comparability, all industry sets are the same size and each contains keywords with an informational search intent.

By looking at search results at industry level, this study continues the approach applied in previous Searchmetrics analyses, such as our series “[Universal Search for Industries](#)” and “[Industry Ranking Factors](#)”.



Results at a Glance – Page Speed across Industries

The table below summarizes the page speed results for all five industries.

Average page speeds by Google position across five industries

Google Positions	eCommerce	Finance	Health	Media	Travel	All Industries
1 to 5	2.8s	2.5s	2.3s	2.8s	2.4s	2.5s
6 to 10	3.2s	2.7s	2.4s	2.9s	2.8s	2.8s
11 to 15	3.2s	2.8s	2.6s	3.2s	2.9s	2.9s

At a glance, the industry page speed results show that:

- Pages ranking highly for health keywords are the fastest, followed closely by travel pages
- Finance pages are about as fast as the overall average across industries
- eCommerce and media pages are slower than average

In all industries, the trend holds that pages ranking on the top 5 positions are faster than those ranking on positions 6 to 15.

More detailed page speed results for each industry are given in the following sections.

Results at a Glance – AMP across Industries

The table below summarizes the AMP results for all five industries, showing how frequently the different AMP integrations appear.

Frequency of different types of AMP integration
across five industries

Type of AMP Integration	eCommerce	Finance	Health	Media	Travel	All Industries
Any AMP	59%	67%	35%	87%	56%	61%
Organic	46%	60%	25%	69%	32%	47%
Top Stories	19%	19%	13%	49%	31%	26%
Mixed Carousel	8%	6%	2%	36%	4%	11%
Publisher Carousel	2%	1%	<1%	14%	<1%	4%

Results at a Glance – AMP across Industries

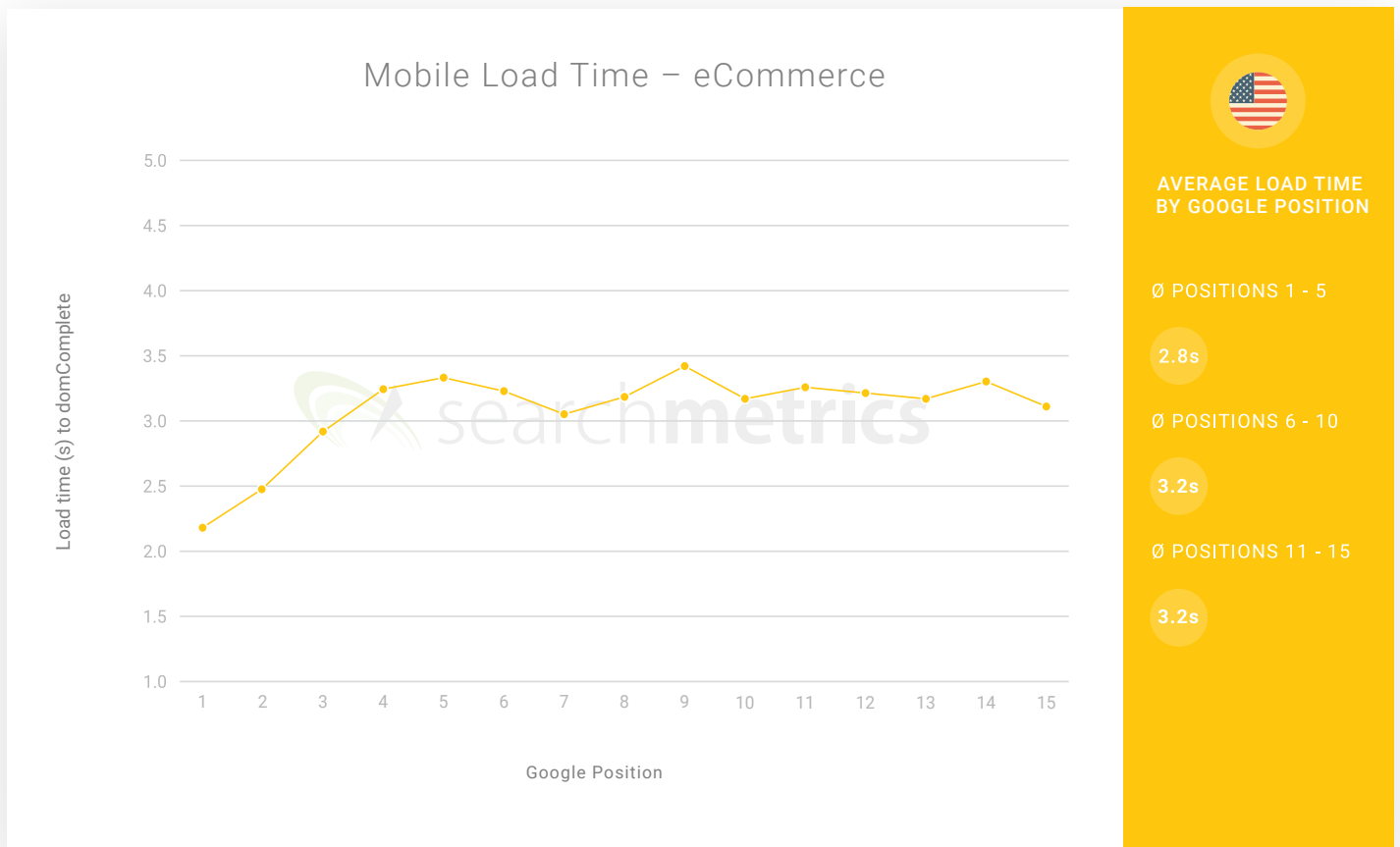
The table below summarizes the AMP results for all five industries, showing how many AMP results appear for each type of integration when it is shown.

Average number of AMP results for different integrations across five industries

Type of AMP Integration	eCommerce	Finance	Health	Media	Travel	All Industries
Any AMP	3.1	3.5	2.1	8.0	2.5	4.3
Organic	1.7	2.1	1.5	2.1	1.4	1.9
Top Stories	1.7	2.0	1.8	1.5	1.9	1.7
Mixed Carousel	7.2	6.7	7.8	8.8	7.9	8.3
Publisher Carousel	6.3	12.7	5.2	11.8	7.5	11.2

eCommerce: Mobile Page Speed

For this analysis, mobile pages ranking for informational keywords related to eCommerce were tested. The average times for pages ranking at positions 1 to 15 in the Google search results are shown in the chart below.

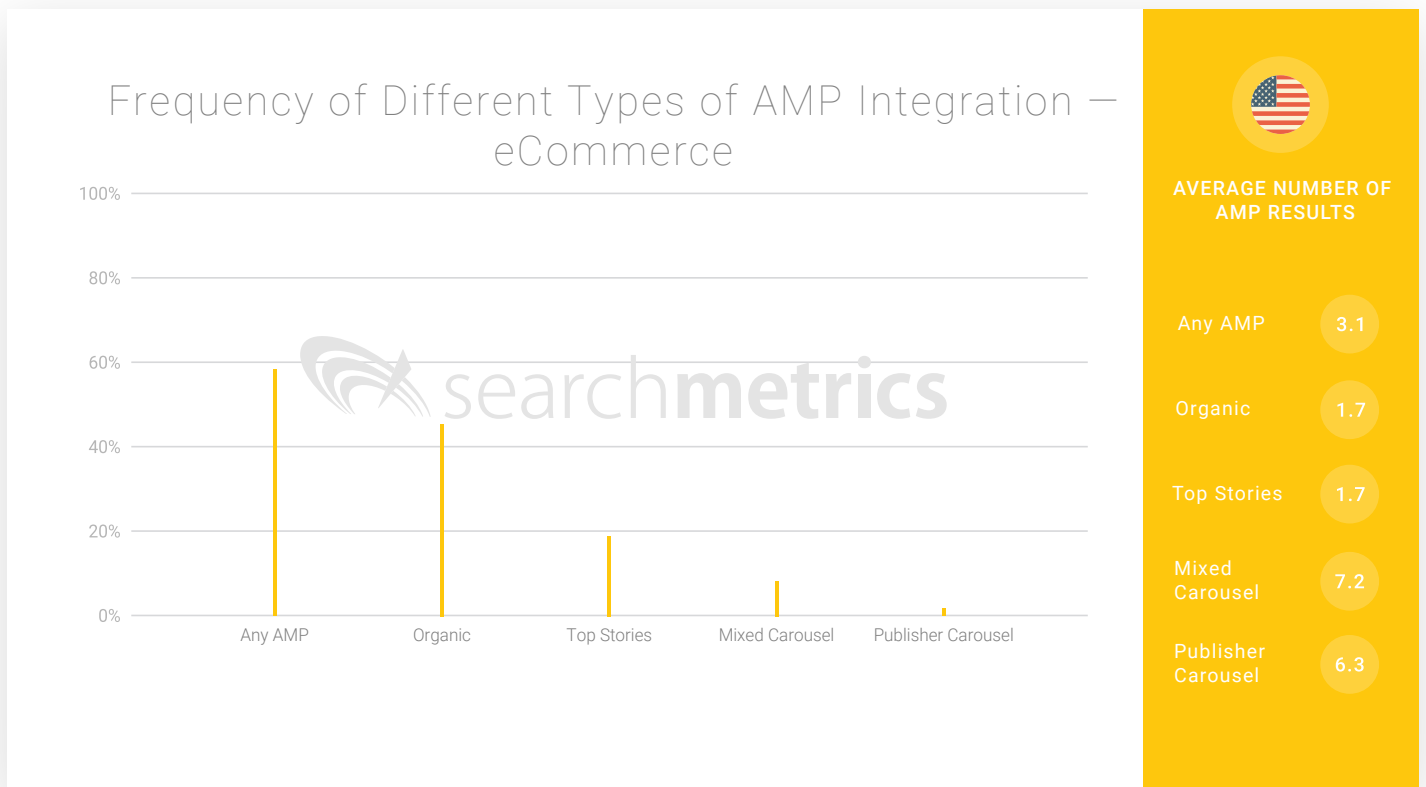


The pages speed chart for eCommerce shows the most direct correlation across positions 1 to 5 of all industries. At the top, each improvement in ranking position is accompanied by a significant increase in speed.

Beyond position six, the trend flattens out completely, with the same average speed for positions 6-10 and 11-15.

eCommerce: AMP

This chart shows how frequently different AMP integrations appear on the first mobile search results page in the eCommerce industry, as well as how many AMP results there are for each integration, when it is displayed.

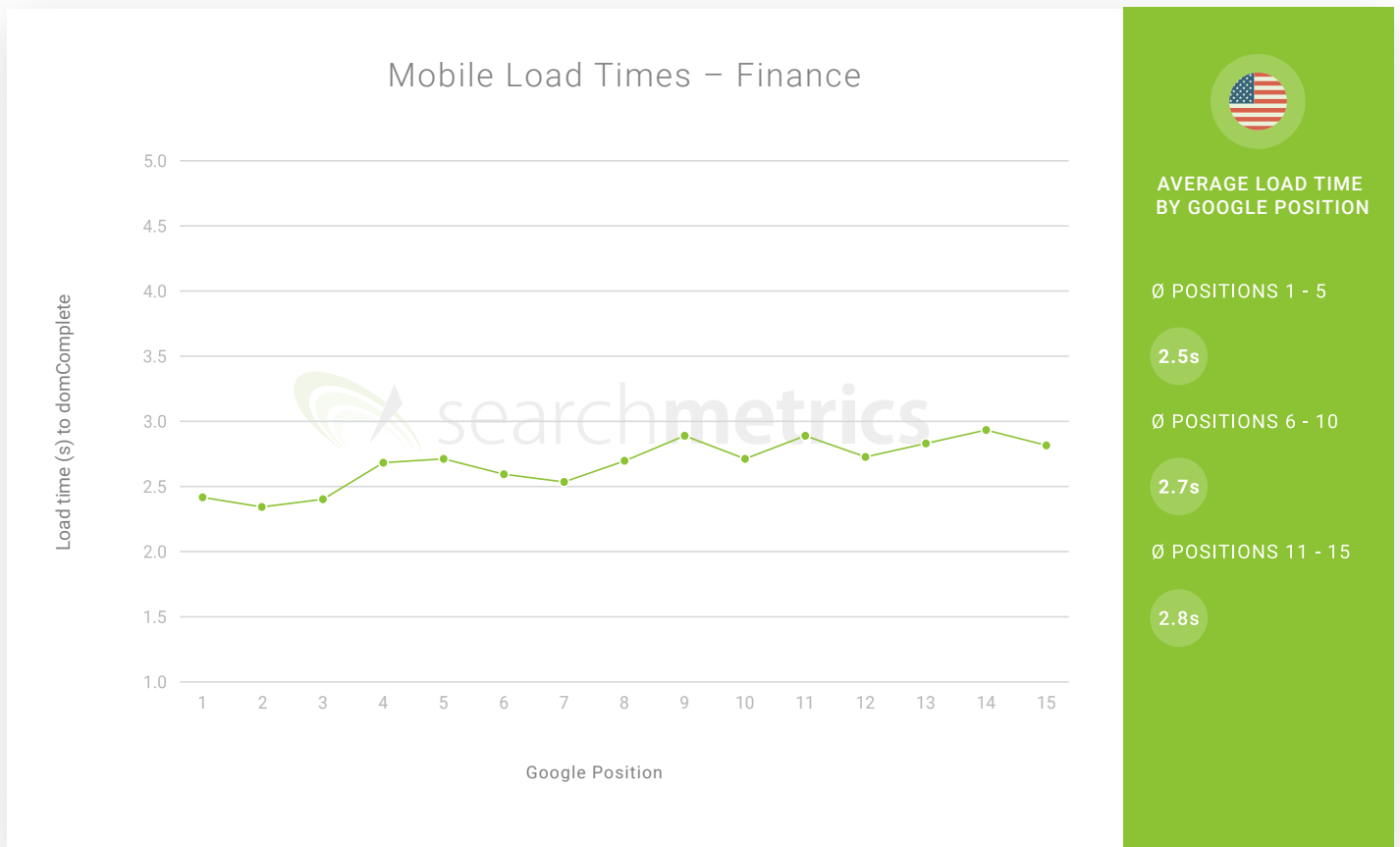


Overall, AMP results are displayed in eCommerce only slightly less frequently than on average. At least one AMP page is found on the first search results page for 59% of eCommerce searches.

With an average 3.1 AMP results on the first page of eCommerce SERPs, if you're not using AMP, then users may turn to competitors who are.

Finance: Mobile Page Speed

For this analysis, mobile pages ranking for informational keywords related to finance were tested. The average times for pages ranking at positions 1 to 15 in the Google search results are shown in the chart below.

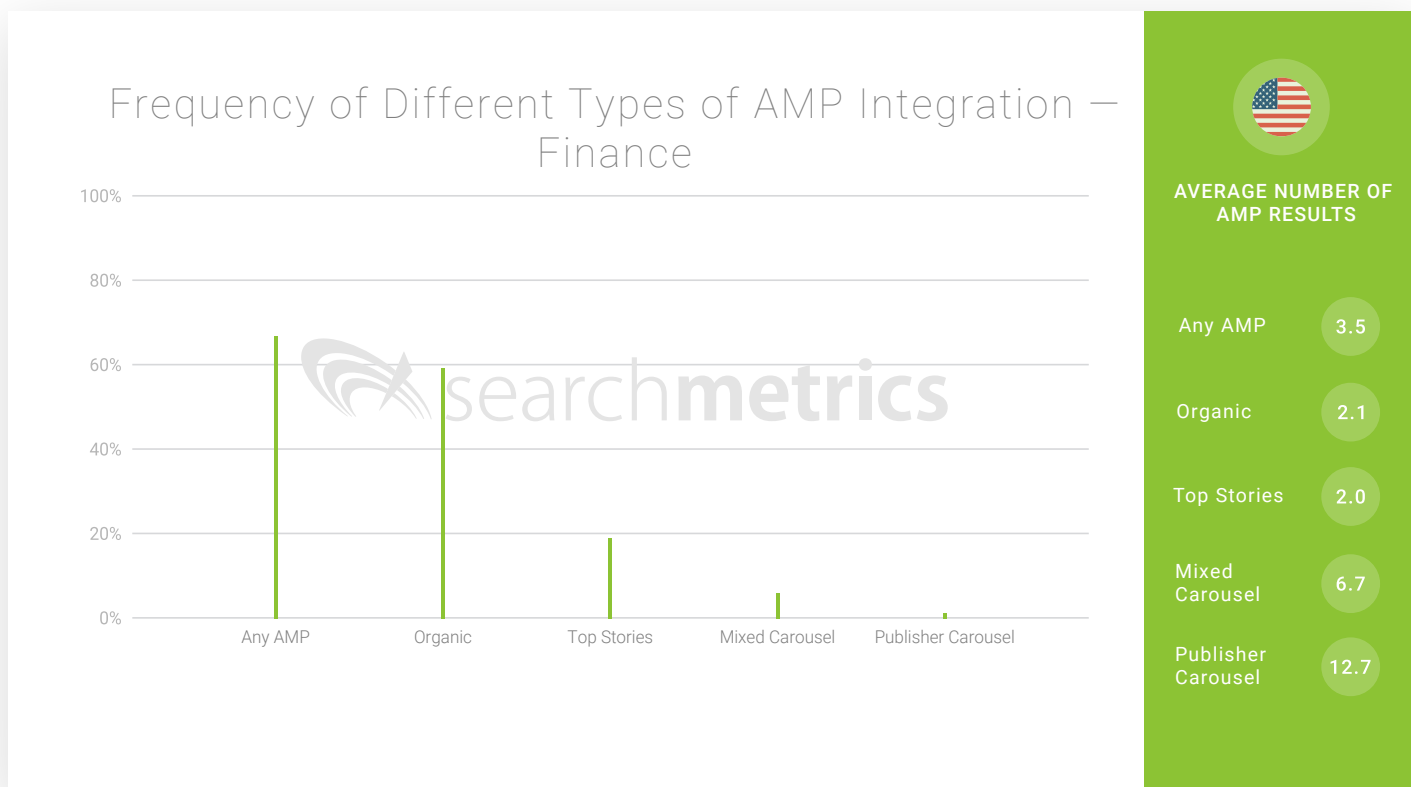


The average speeds for finance pages do not differ greatly from the benchmark rate. However, the trend in the finance industry is slightly different, with the top three pages making the running and the biggest slowdown coming between third and fourth position.

This suggests that, in finance, speed is helpful for getting into the top three, it is other factors that decide how the spots on the podium are distributed.

Finance: AMP

This chart shows how frequently different AMP integrations appear on the first mobile search results page in the finance industry, as well as how many AMP results there are for each integration, when it is displayed.

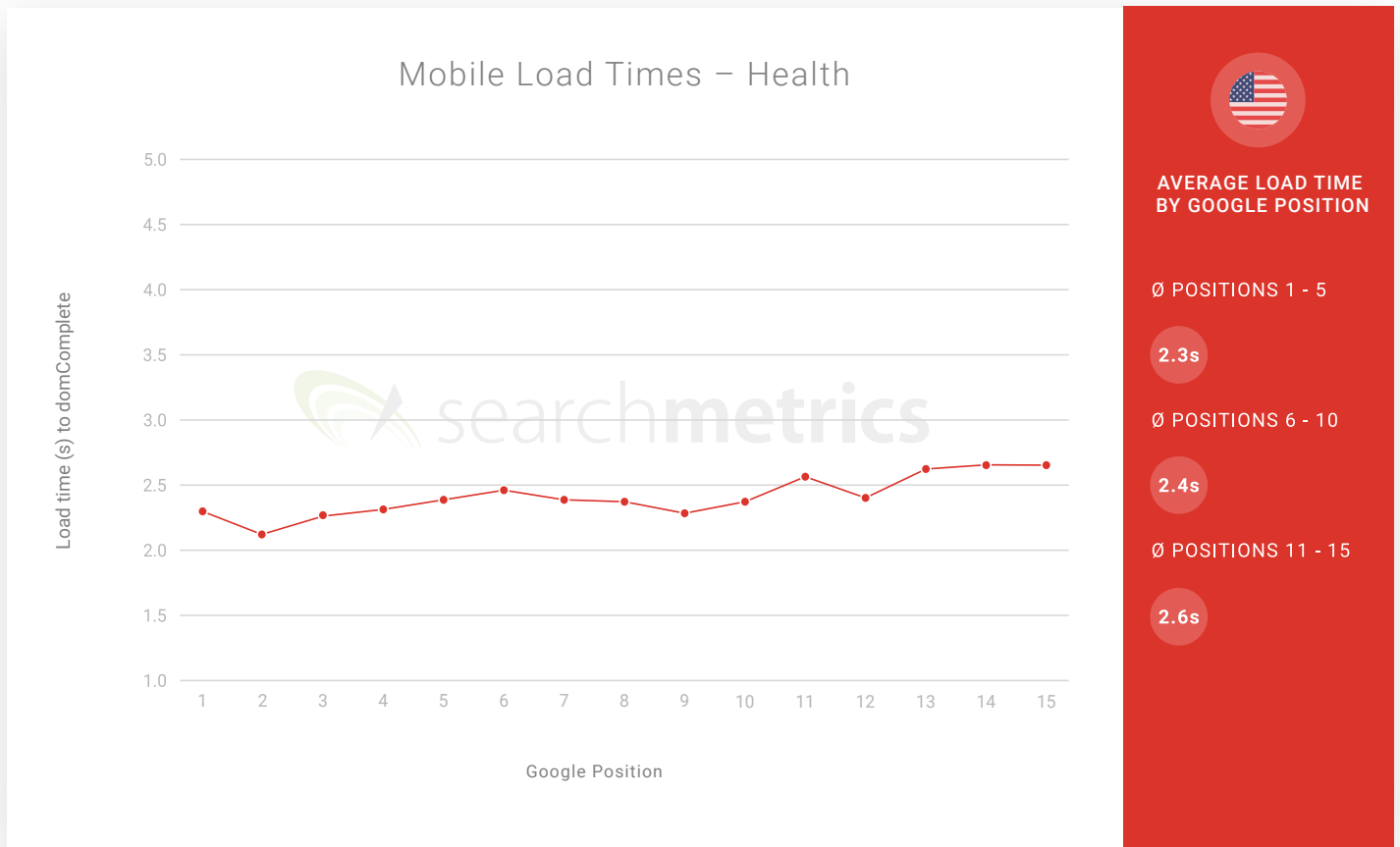


AMP pages show up for two thirds (67%) of finance searches, more than the overall average. Interestingly, the vast majority of AMP results in the finance keywords are organic, with top stories and carousels appearing less frequently than in other industries.

The high presence of organic AMP results shows that you don't have to be pushing news to get your AMP page ranking highly – any relevant content can get a boost by making use of the lightning-quick framework.

Health: Mobile Page Speed

For this analysis, mobile pages ranking for informational keywords related to health were tested. The average times for pages ranking at positions 1 to 15 in the Google search results are shown in the chart below.

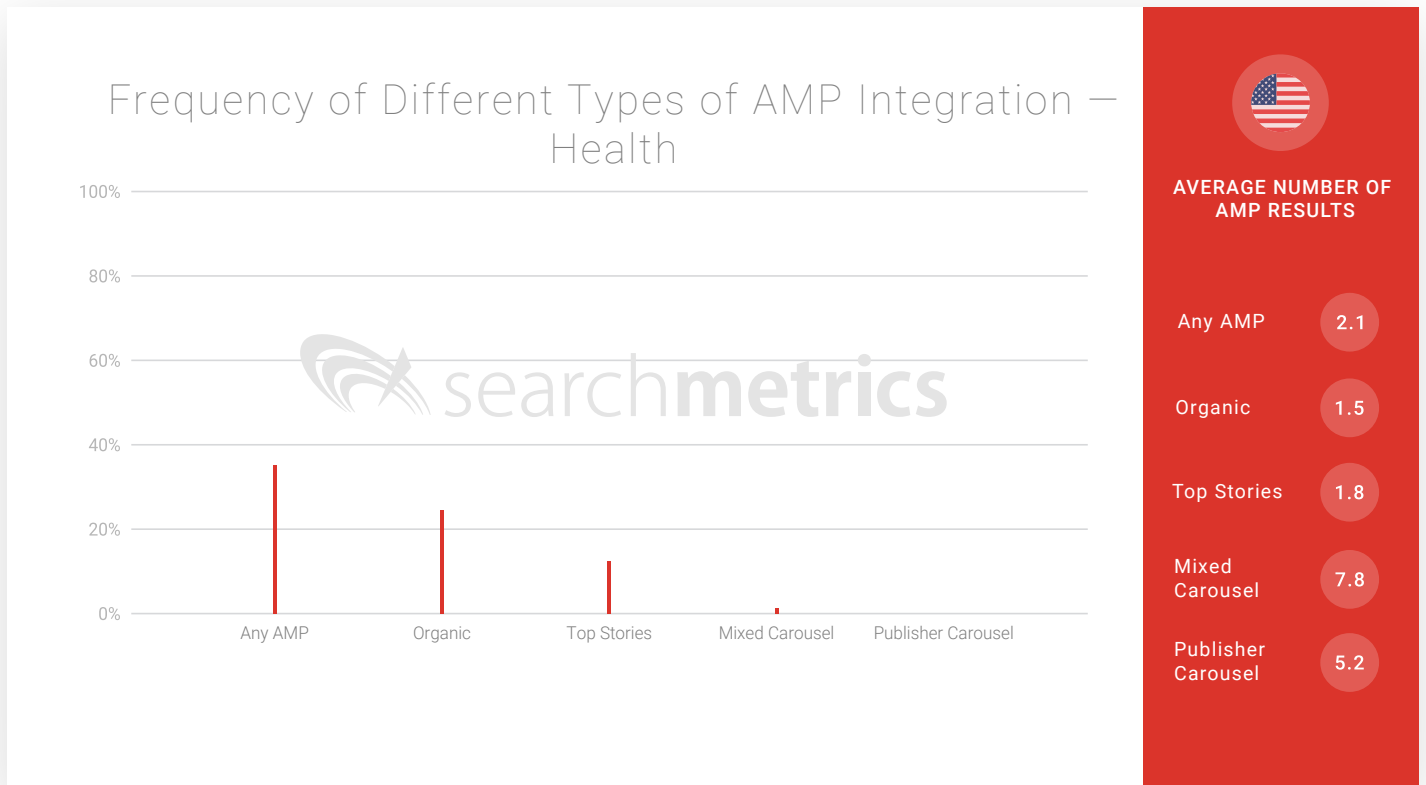


On average, the health pages analyzed for this study are the fastest of any industry. Even those ranking lower down, at positions 11 to 15, are as fast as the quicker pages in other industries. One contributing factor could be that health sites tend to focus on text, rather than audio-visual content, which can keep the page's file size down and help it load more quickly.

Additionally, there is less of a difference between the best ranking health pages and those from positions 6 onwards, suggesting that the strength in depth (or rather: speed in depth) is more pronounced amongst health websites than in other industries.

Health: AMP

This chart shows how frequently different AMP integrations appear on the first mobile search results page in the health industry, as well as how many AMP results there are for each integration, when it is displayed.

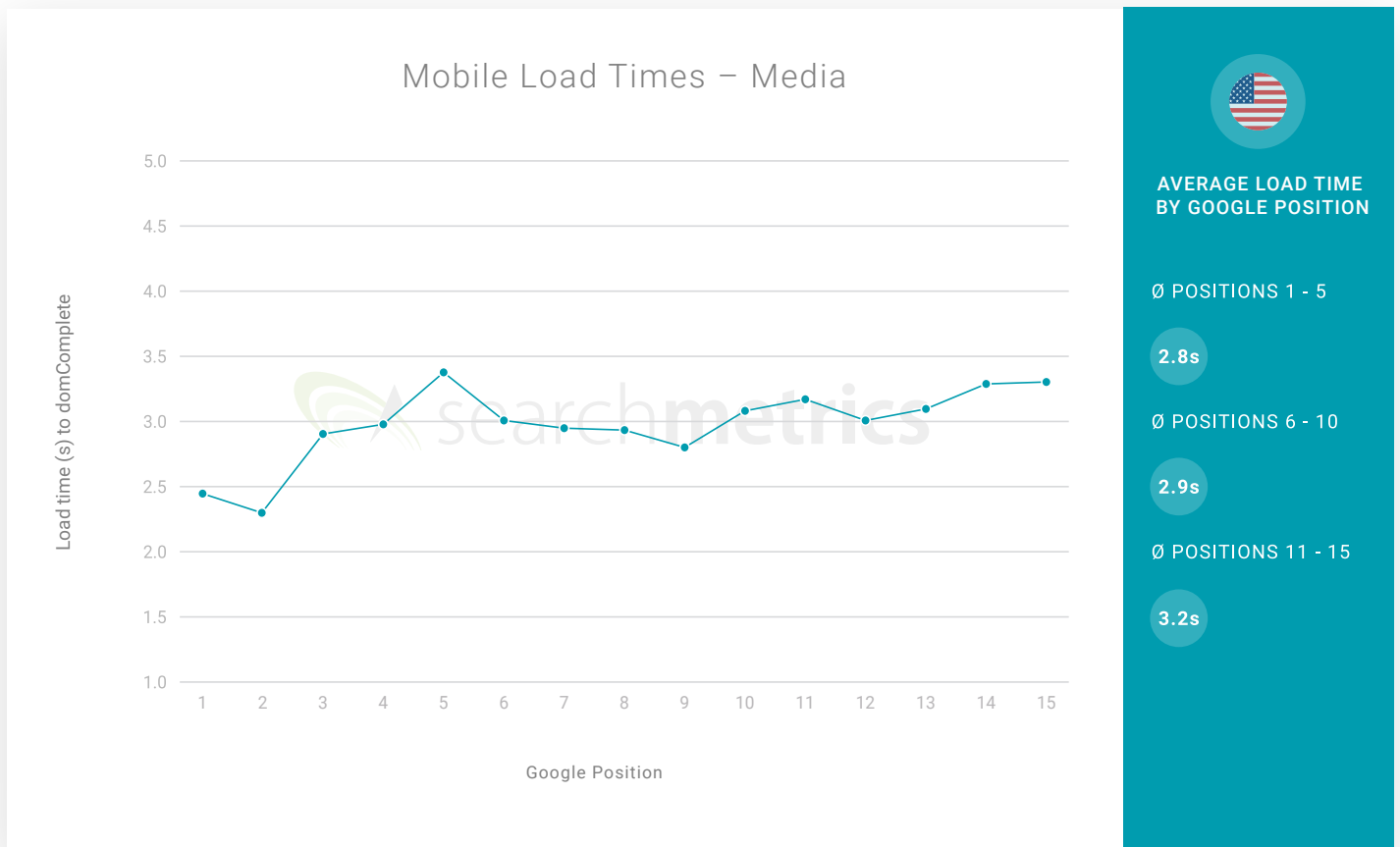


AMP pages appear less frequently for health searches than in any other industry. Only 35% of health keywords return any kind of AMP integration, with carousels almost non-existent.

As health pages are also the fastest of any industry (on average), this means that many websites are providing their users with content quickly, even without AMP. However, with so few AMP results appearing on the first page, the ones that do appear have a better chance of standing out.

Media: Mobile Page Speed

For this analysis, mobile pages ranking for informational keywords related to media were tested. The average times for pages ranking at positions 1 to 15 in the Google search results are shown in the chart below.

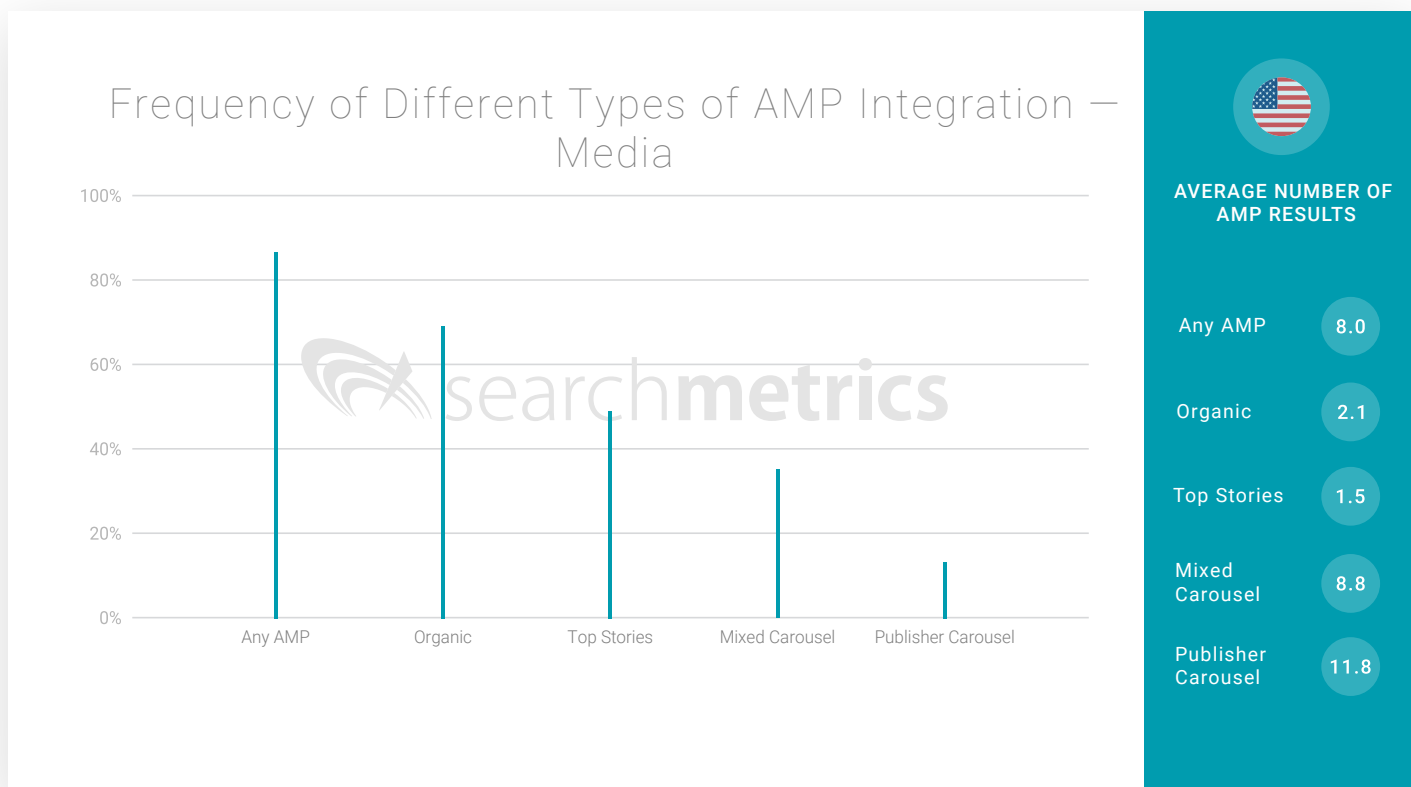


Media pages load more slowly than in other industries. Whilst the average load times may be longer, the trend is similar, with URLs ranking in the top five – and particularly the top two – loading more quickly than those lower down in the Google search results.

Media search queries are often well-served by images and/or video content, which takes longer to load than text. This could be one reason why media pages tend to load slightly more slowly.

Media: AMP

This chart shows how frequently different AMP integrations appear on the first mobile search results page in the media industry, as well as how many AMP results there are for each integration, when it is displayed.



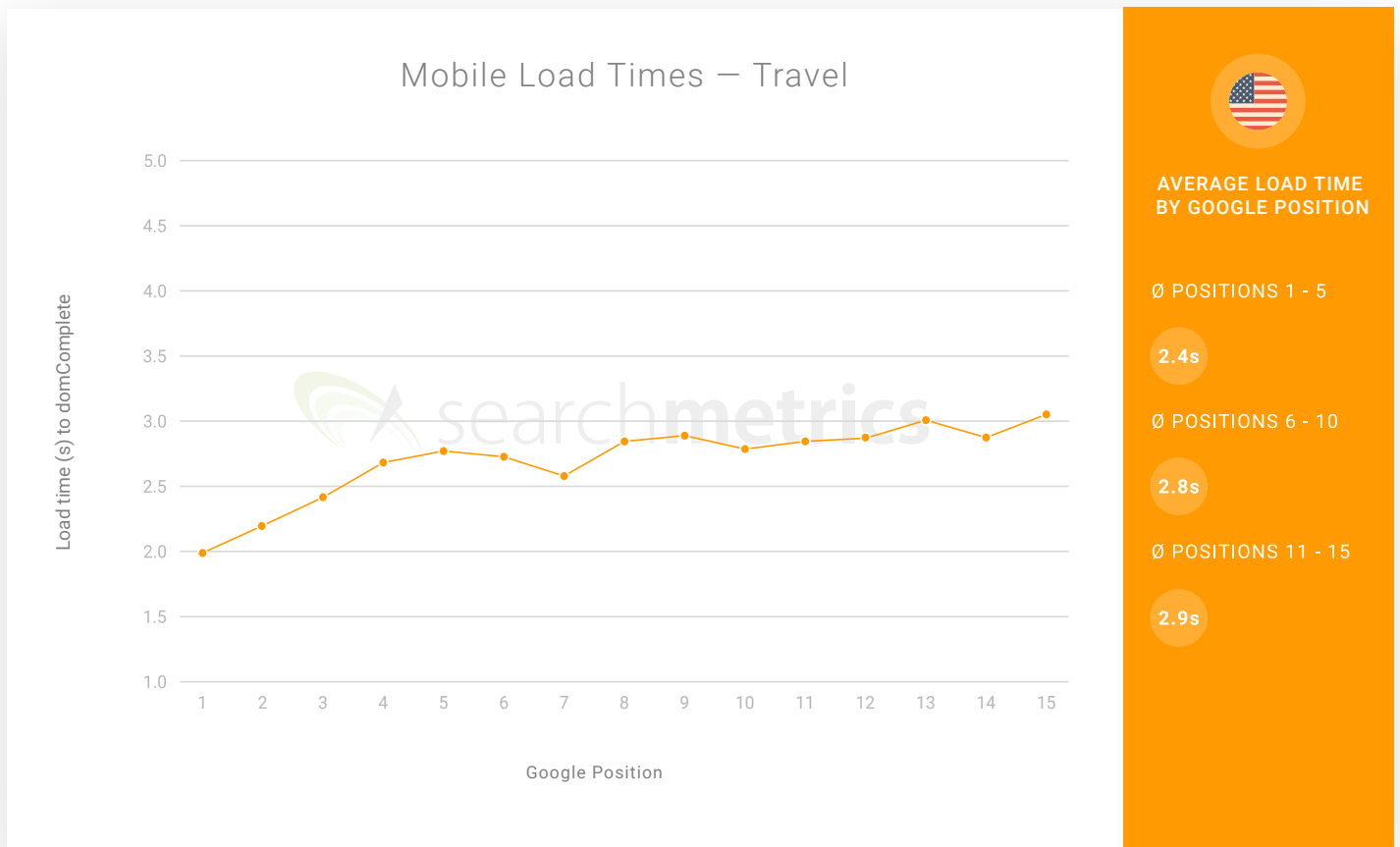
As AMP has its origins with news portals and publishers, it is of little surprise to see media sites making most frequent use of the AMP framework, with 87% of media industry searches returning at least one AMP page on the first results page.

Not only is the overall rate much higher than in other industries, but carousels, both mixed and those dedicated to a single publisher, appear much more often. This impacts strongly on the total number of AMP results – with an average eight AMP URLs appearing on the first results page (when there is any AMP at all).

The fact that non-AMP pages in the media industry tend to load more slowly than average emphasizes the huge advantage to be gained for media websites that provide AMP versions of their mobile pages.

Travel: Mobile Page Speed

For this analysis, mobile pages ranking for informational keywords related to travel were tested. The average times for pages ranking at positions 1 to 15 in the Google search results are shown in the chart below.

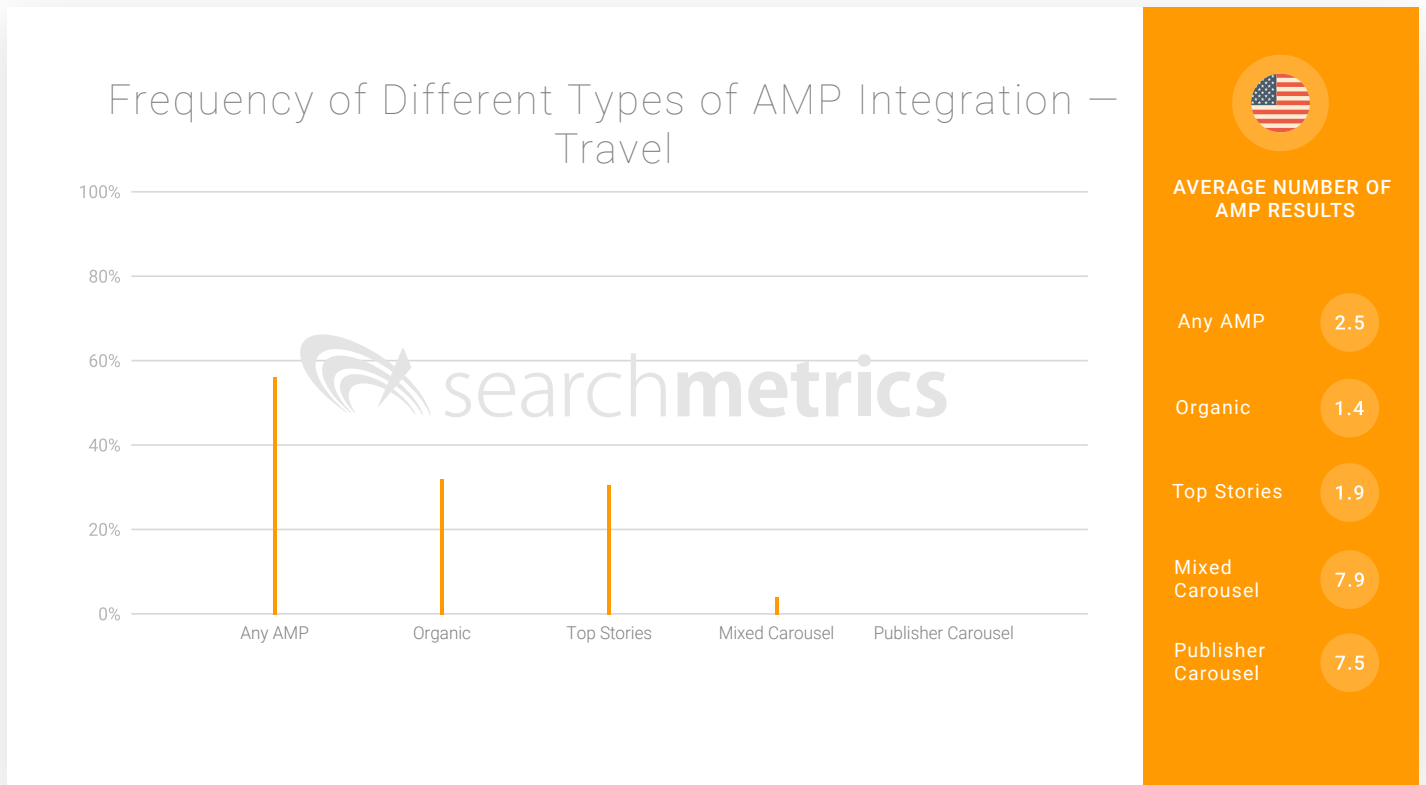


Travel pages ranking on the first five positions load more quickly than those lower down the SERPs. This trend is much clearer than in other industries like finance or health.

Overall, travel pages load more quickly than in all industries analyzed, except for health. This suggests that leading websites in the travel agency pay attention to the technical optimization of their pages better than in other sectors. Travel sites that don't optimize for site speed are likely to be left behind by the competition.


Travel: AMP

This chart shows how frequently different AMP integrations appear on the first mobile search results page in the travel industry, as well as how many AMP results there are for each integration, when it is displayed.



Overall, AMP is not as widespread in the search results pages for travel keywords as in other industries like eCommerce and finance, with organic AMP results, in particular, appearing less frequently. Under one in three (32%) travel searches return an organic AMP result on the first page.

However, the specific AMP integration of top stories does appear for travel keywords more often than in other industries, showing that AMP pages with latest news are often able to find their way onto travel-related SERPs, and pull traffic away from providers of less current content.



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