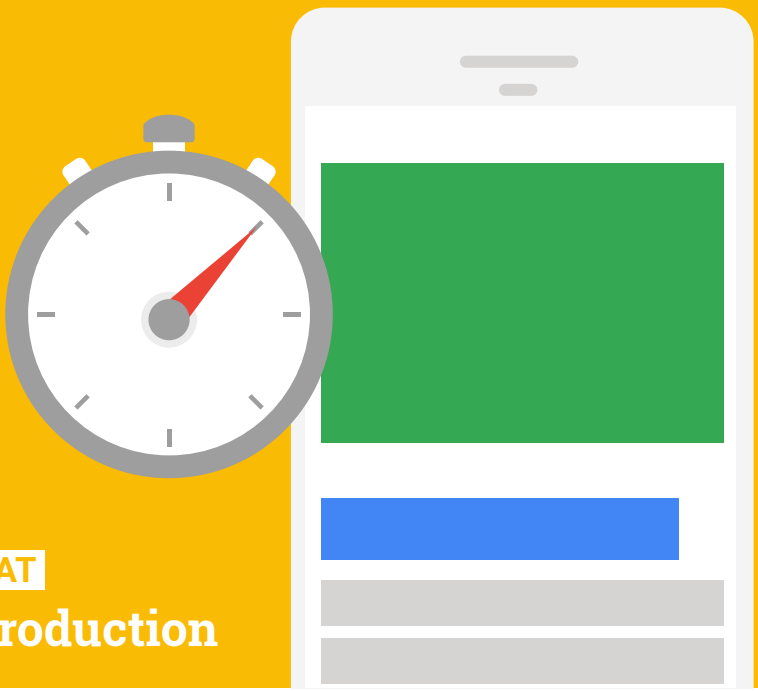
Mobile Site Speed

Playbook

Google



WHAT

Introduction

In October 2016, mobile and tablet internet usage exceeded desktop for the first time worldwide[1]. People spend more time than ever on their smartphones and tablets: searching; making purchases; subscribing to services. In 2015, Google introduced mobile-friendliness as a ranking signal on mobile searches in all languages worldwide. We believe this is a trend that's here to stay.

74% of people in the UK now use smartphones (up from 51% in 2012) and 65% of all adults use a smartphone as their primary device to go online[2]. As a result, people access the web more often - 73% of people in the UK do so daily[3] - and the rise in usage has driven up consumer expectations. They have little patience for bad performance - if they can't get what they want, when they want it, then another option is just one tap away.

Consumer behaviours are shaping the next generation of mobile experiences

Consumer expectations have never been higher. We are living in the golden age of user experience, with startups' focus on simplicity upending entire industries, and traditional companies having to reinvent themselves in order to stay relevant.

Technology enables rich consumer experiences, and this has an impact on marketers, with brands no longer competing purely to provide the best experience in their respective categories; instead, they need to offer the best experience a consumer has ever had. Every time a company comes up with a rich, useful or innovative design, it raises the bar. And if an experience is frustrating or annoying, a company loses customers. In fact, 50% of users abandon mobile transactions because of a poor experience[4].

Mobile site speed as a key to success

Across the globe, mobile devices dominate time spent online and in the UK they account for more than 60% of usage[5]. The total browse time per month is also much higher on smartphones - 66 hours per month in the UK compared to 29 hours per month on desktop[6].

Speed is key. 75% of people in the UK say that the speed it takes to load a page has the most impact on their overall experience[7], and state of mind can affect this: when people are on-the-move, accessing the web from their mobile devices, they are far more conscious of delays.

WHY

Site Speed as a Business Priority

Reach and discoverability of the web

There are currently 5 billion devices connected to the web[8]. On average, the web has three times more monthly users than native apps, yet users spend more time on native apps - a compelling reason for brands to focus on them. However, time on apps tends to be concentrated in a few categories like entertainment, social & messaging[9], and with consumers increasingly relying on the mobile web for research and discovery, they may not want to spend storage and data on downloading an app. The next generation of web technologies are introducing native app-like features that add capabilities and improve mobile web experiences. Today, it is critical for brands to have an effective mobile web presence.

Building great user experiences

Experimenting with new technologies can help to build a great user experience – but it can also make it challenging. Rather than think about the technologies first, imagine the experience you'd want as a consumer and work towards that. Consumers expect fast, relevant and frictionless experiences.

> How can you become as radical at reducing friction as the McDonald's Drive Thru or Amazon Prime?

Faster experiences matter

Consumers are ever more impatient. As technology enables faster experiences, we have become accustomed to instant purchases and same-day delivery, and our willingness to wait has decreased. Our mobile devices help us in ways we couldn't have imagined a few years ago. We can pay for coffee with a tap, or order detergent with a voice command to a digital assistant. As a result, consumers are shifting their thinking from, "Who does it best?" to "Who does it best right now?"

If you don't make speed a key performance metric then your business may pay the price. We recently tested 900,000 mobile sites globally and found that the average time it takes to fully load a mobile page is 22 seconds[10].

22 secs
to fully load a page

53% will leave a mobile site if it takes **more than 3 secs to load**

Fifty-three percent of people will leave a mobile site if it takes more than three seconds to load, and 50% of users in the UK

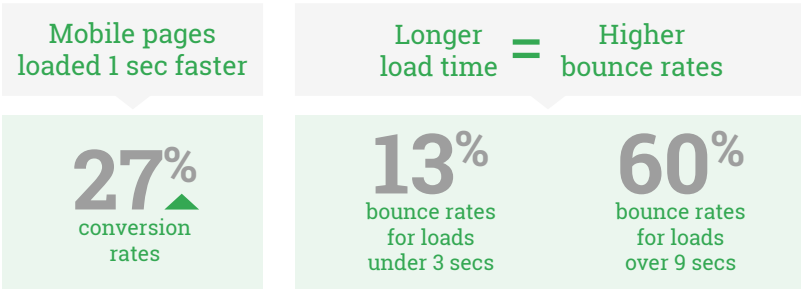
abandon mobile transactions because of a poor experience[11]. Users now regard a satisfactory load time as two seconds or less.

To help brands analyse site usability and speed, Google reviewed 316 travel, retail, and finance sites across seven European countries last year to determine who has mastered mobile and who still needs to pick up the pace[12]. The average speed for all three verticals is slower than the good point (of two seconds), with the top retail sites performing the best, at 3.8 seconds. Only 14 loaded in two seconds or less (read more).

Improved site speed benefits

When marketers prioritise speed it has a ripple effect. Designers must select visual elements, fonts and a structure that allow for fast, frictionless mobile experiences. Then, developers can further optimise to ensure the best possible result for customers.

Faster pages lead to better conversion rates which in turn improves ROI. A recent study run by SOASTA demonstrates the impact of site load speed: mobile pages that loaded one second faster saw up to 27% increase in conversion rates[13]. On the other hand, longer load times led to higher bounce rates, averaging at 13% for loads under three seconds and going up to almost 60% after nine seconds.



Success Stories

Money.co.uk

Money.co.uk worked with Google to audit their site and identify speed and usability changes to improve the customer experience. As a result of the audit and subsequent improvements, load times have dropped from 11.7sec to 3.5sec. This led to an improvement in click through on their site from 12% to 32% and a decrease in bounce rate from 80% to 52%.

Page Click Through Rate 12% ▸ **32%**

Bounce Rate 80% ▸ **52%**

Kempinski Hotels

Kempinski Hotels wanted a better understanding of speed performance across devices as they began the process of redesigning their site. They used Google's Mobile Speed Test and PageSpeed Insights to establish a baseline for comparison, and then made use of detailed recommendations from these tools to inform their new site architecture. The new, speedier site has since led to an 11% increase in conversion rate (read more).

Conversion Rate ▲ **11%**

Business Comparison

BusinessComparison.com turned to PageSpeed Insights and Google's mobile website usability principles when they wanted to optimise performance for the 45% of customers visiting them via mobile. They conducted usability workshops and then split-tested different approaches to mobile usability using Google Analytics. As a result of these speed and usability enhancements, conversion rates for mobile grew by 22% (read more).

Conversion Rate ▲22%

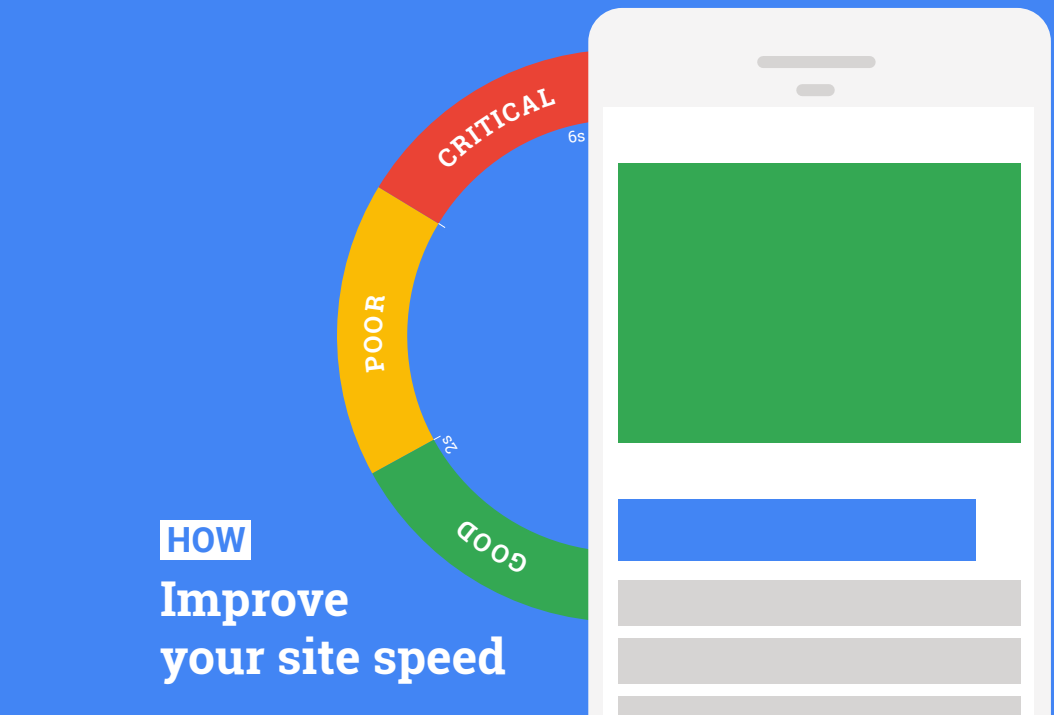
Everest

After performing a comprehensive speed and user experience audit of their site, Everest embarked on a project to look at how these factors influence the conversion performance of their website contact forms. Armed with crucial data about the speed of their pages and the impact of third-party tags on load times, they reviewed their entire technical infrastructure and page-load logic. These speed and usability insights contributed to a larger redesign project, which ultimately yielded conversion rate improvements of more than 40%.

Conversion Rate ▲40%

Settled

Settled, an innovative online estate agency, used Progressive Web Apps to massively boost the speed and performance of their mobile site. More than 65% of Settled's traffic comes from mobile devices, so they knew that anything they could do to improve their mobile user experience would have a profound effect on their business. With this in mind, they redesigned their mobile offering using Progressive Web Apps, adding rich app-like notification and offline capabilities to their mobile site. With on-device caching and other enhancements, page load times improved almost three-fold, resulting in lower bounce rates, reduced cost-per-conversion and an increase in mobile conversion of 23% (read more).



HOW

Improve your site speed

Your first step should be deciding on the consumer experience you want to deliver. To understand how customers experience your brand, conduct an audit of your website.

Free tools you can use to run your own site audit

Basic

Think with Google Site Test Tool

Simple enough to be used by anyone, Google's Test My Site Tool gives you an actionable report on how to speed up and improve your site. Type in your website address and get a score for your site, along with a more detailed report with specific suggestions on things to fix, and page speed insights identifying ways to make your site faster and more mobile-friendly.

Advanced

WebPage Test

This tool allows you to run a free website speed test from multiple locations around the globe using real browsers (Internet Explorer and Chrome) at real consumer connection speeds. You can perform simple or advanced tests, including multi-step transactions, video capture and content blocking. The results provide rich diagnostic information: resource loading waterfall charts, page speed optimisation checks and suggestions for improvements.

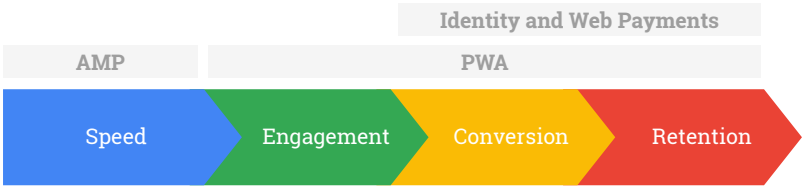
Next generation of the web technologies

New mobile web technologies allow you to move beyond optimising your existing site and really revolutionise your customers' mobile experience.

The four pillars to a great user experience are:

- **Speed:** Bringing the visitor to the website quickly
- **Engagement:** Keeping the user on the site and getting them to return
- **Conversion:** Turning the user into a paying customer
- **Retention:** Increasing customer lifetime value

Three new technologies are currently helping to facilitate great user experiences: Accelerated Mobile Pages (AMP), Progressive Web Apps (PWA) and Identity & Web Payments.



Accelerated Mobile Pages (AMP)

AMP aims to make web content instant, anywhere, and to ensure content is as compelling as possible. An open-source initiative, the AMP Project is available to ad partners across the industry who adopt the spec, and is seeing great momentum within the ecosystem.

0.7 seconds median load time

4X faster

10X less data

AMP helps brands make their sites significantly faster. The median time to load an AMP page from Google Search is under a second, requiring ten times less data than an equivalent non-AMP page. There are over two billion AMP pages live today, including Bing, LinkedIn and Medium.

*Talk to your Google rep and visit **www.ampproject.org** to learn more about AMP.*

Progressive Web Apps (PWA)

Progressive Web Apps aim to work everywhere, for every user. They incorporate great functionality and include features and performance benefits normally associated with native apps: local caching, offline availability, add to homescreen and push notifications.

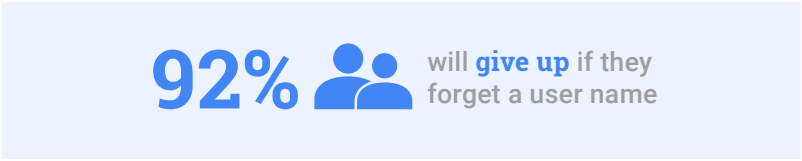
Progressive Web Apps are based on a set of new web standards, shipping in Android-based Chrome, Firefox, Opera, and Samsung browsers, and soon to be available in other browsers too. They allow developers to build sites that load fast, work great offline, and progressively enhance the consumer experience in modern browsers. Around two thirds of all mobile web browser sessions in Europe support these features.

*Talk to your Google rep and visit **https://developers.google.com/web/tools/lighthouse** to learn more about PWA.*

Identity and Web Payments

The web today is better than ever, allowing brands to build fast, rich, app-like mobile experiences. So, why doesn't mobile web traffic translate into higher conversion rates? Along with the issues outlined above, limited capabilities and a small screen can make inputting information tedious for the user. Research shows that over half of users will quit rather than doing yet another sign-up, and 92% will give up if they forget a user name[14].

Two Javascript APIs are currently available for seamless sign-ups, sign-ins and payments: Credential Management and Payment Request.



Credential Management API

- Enables a one tap sign-in for your existing customers by using an account chooser dialog so consumers can sign in simply by selecting an account.
- Remembers federated logins, providing a seamless login account selection experience between id/password and federated logins.
- Enables auto sign-in, giving websites with short session duration cross-device access.

Payment Request API

Long checkouts are one of the leading causes of abandonments. Payment Request API is an open API supported by multiple browsers (Chrome, Internet Explorer, Firefox, Samsung Internet). Simple to implement, it integrates into your existing checkout flow and provides a seamless experience which avoids the user being sent to a third party website or dropped out of the conversion process. It is also secure - the payment information remains between you and the user.

This experience is now available across all platforms where Chrome is accessible, and should soon be rolled out to all platforms and devices, increasing conversion rates across the board.

*Talk to your Google rep and **visit g.co/PaymentRequestGuide** and **g.co/PaymentRequestCodeLab** to learn more about Credential Management and Payment Request.*

► *For more information visit **https://developers.google.com/***

References

[1] StatCounter Global Stats, Nov 2016

[2] The Connected Consumer Survey 2012-2016

[3] Office for National Statistics (ONS) 2013

[4] Google Data, Global, n=3,700 aggregated, anonymised Google Analytics data from a sample of mWeb sites opted into sharing benchmark data, Mar. 2016

[5] ComScore MMX Multi-Platform, Jan 2017

[6] ComScore Mobile Metrix, Aug 2016, adults 18+, all smartphones, browsing and application combined

[7] Evaluating the role of speed in mobile experiences research, Google and Basis, June 2017

[8] Source: we are social

[9] ComScore Media Metrix MP and Mobile Metrix, U.S., Total Audience, June 2015

[10] Google Research, Webpagetest.org, Global, sample of more than 900,000 mobile websites across small, medium, and Fortune 1000 businesses. Testing was performed using Chrome and emulating a Nexus 5 device on a globally representative 3G connection. 1.6Mbps download speed, 300ms Round-Trip Time (RTT). Tested on EC2 on m3.medium instances, similar in performance to high-end smartphones, Jan. 2017.

[11] Google Data, Global, n=3,700 aggregated, anonymised Google Analytics data from a sample of mWeb sites opted into sharing benchmark data, Mar. 2016

[12] You can find details on an article titled Mastering Mobile at the EMEA Performance Summit available on Think with Google.

[13] Source: SOASTA Case study (September 1st, 2015)

[14] Blue Research & Instant Checkmate, 2013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