

# Mobile First Web Design and Development: The Importance of Optimizing for Mobile

The internet is increasingly being used on mobile devices, and as developers and designers, we need to adapt and create responsive content for every medium.

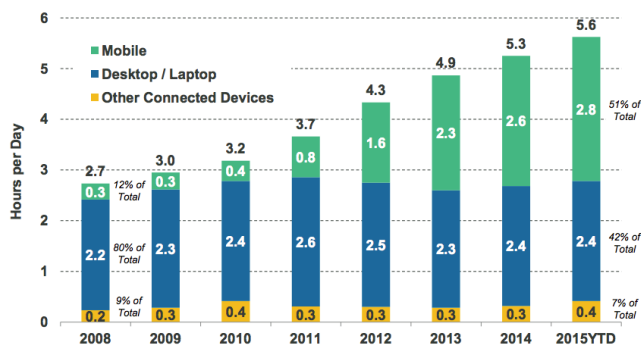
Mobile-first design takes the mobile user experience into account as the main focus, allowing for content to be more succinct, and the overall feel of your website to be uniform between devices.

The internet is constantly evolving: from changes in search engine optimization, design standards, user experience (UX) implementation, and even where we're accessing the internet. Speaking statistically, in 2018, 61.2% of internet usage is predicted to be through mobile devices (according to [Statista](#)). With more than half of all of the interactions with our websites being based on mobile devices, it's about time that the development standards for websites shift toward favoring mobile-first design.

Mobile-first web design is the concept of designing and developing your website starting with the smallest supported screen size, then moving up to the largest—rather than the traditional fashion of doing it the other way around. This method may seem counter-intuitive given that most development is done while sitting at a powerful desktop computer with a massive display. The truth of the matter is that we're quickly switching to the computers in our pockets, and we should be prioritizing these devices.

Internet Usage (Engagement) Growth Solid  
+11% Y/Y = Mobile @ 3 Hours / Day per User vs. <1 Five Years Ago, USA

Time Spent per Adult User per Day with Digital Media, USA, 2008 – 2015YTD



@KPCB Source: eMarketer 9/14 (2008-2010), eMarketer 4/15 (2011-2015). Note: Other connected devices include OTT and game consoles. Mobile includes smartphone and tablet. Usage includes both home and work. Ages 18+. Time spent with each medium includes all time spent with that medium, regardless of multitasking.



An example of the process for mobile-first web design concepts.

Now, you might be thinking, “But we design responsive websites, so we *are* prioritizing our mobile device users.” You aren’t wrong in this statement, as most web development takes responsive design into account, with elements moving and shrinking to fit into smaller screens. The issue with traditional responsive design (built from largest to smallest screens) is that we don’t prioritize content, and generally, even if the user can’t see an asset at their screen size, you’re probably still loading it. Traditional responsive design gets the job done, but it’s not efficient and can be a headache to work through—especially when trying to cram content into spaces where it might not fit.

Pagespeeds are vital when producing content that is indexed by a search engine. Google is taking pagespeeds into account when ordering search results, too—so the better you can make your pagespeeds, the better overall experience your website will have.

This isn’t to say that we’re moving away from responsively designed websites. Mobile-first is a *design strategy*, while responsive is a *technical approach*. You should still be designing responsive websites, but you should start with mobile screen sizes and work up from there. Mobile-first design boasts several benefits, including prioritized content, user experience design that favors mobile devices, decreased asset download time (because you’re only loading what is needed by each screen size), and an overall standardized experience across platforms.

**First**, let’s touch on content prioritization. This benefit spills over into another benefit we’ll touch on later, and that’s the idea of pagespeeds. By choosing a mobile-first web design approach, you can be sure that only the assets that are necessary for any particular screen size are loaded. Think about mobile phone usage for a moment: we’ve got our smartphones with us basically 24/7, in a wide variety of different connectivity situations—from 3G & EDGE connections, to 4G & Wi-Fi—so, different internet connections (and thus, pagespeeds) are something we always need to be aware of when designing websites. With the ability to tailor content, images, etc. to only be used at certain screen sizes, we enable websites to load as efficiently as possible. That’s not the only benefit regarding content that comes from mobile-first web design.

When people visit a website, they're almost always looking for information. By prioritizing our content, we can make sure that the key pieces of information are always available, at any screen size, and that there isn't a ton of filler content for our mobile users to sift through to find what they're looking for. This enhances the user experience of your website, offers better conversion rates, easier means to find information, and leads to happier, more frequent users of your site.

With the ability to feed your users the exact content they're looking for, at a speed that's comparable, if not better than your desktop site, you're more likely to increase your web traffic, and overall have a more consistent user-base. This, in turn can create leads, customers, and promoters of your brand. Something to remember: the average internet user has an attention span of just **eight seconds**. Being able to feed them exactly the content they're looking for in these eight seconds is key, and leads to a better overall experience on your website.

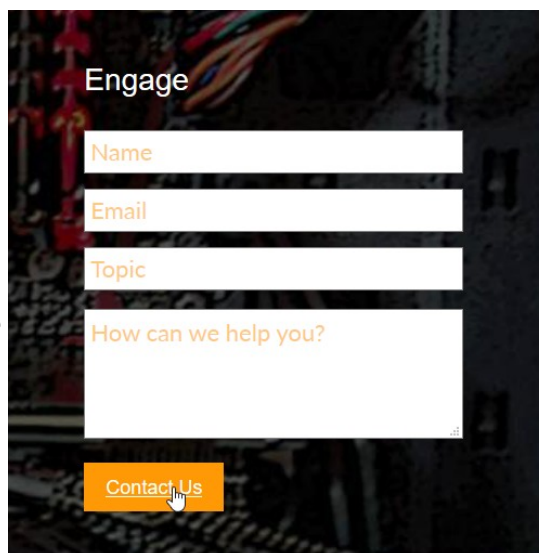
**Second**, mobile-first web design allows us to create a user experience that favors mobile users. Now, that's not to say we're forgetting about our desktop users, but taking into account the statistic I mentioned, over 60% of your traffic is probably coming from mobile devices. Making sure that you offer the optimal experience on mobile devices is becoming a towering issue, and the best way to tackle this change is mobile-first web design.

There are several ways to further increase the user experience besides the mobile-first strategy. One of these is by using links that allow users to click on a phone number and make a phone call. The "tel" protocol on links has been around for a while, but not everyone is using it. Allowing a user to click a phone number, instead of having to remember or copy-and-paste it, may seem like a minuscule change, but the results can be staggering. Convenience is the reason we as a species focus on technology, with each device attempting to make our lives easier, so we can tackle increasingly complex tasks. Websites are no exception to this technological path, so convenience and ease-of-use should always be high priorities.

Mobile users  
comprise over 60% of  
all internet users,  
with 1.2 billion  
mobile users  
worldwide.  
Prioritizing their user  
experience means  
you'll be prioritizing  
the majority of your  
website's visitors,  
while still having a  
site capable of  
desktop use.

Simply adding the CSS property "cursor: pointer" to change the look of the cursor, is sometimes enough to make a piece of content look interactable.

Another convenient tool to increase the user experience falls into the idea of web design. The goal of a website is to promote interaction, and optimally, to gather information about the visitor. Without clearly identifying which aspects of your site are supposed to be interacted with, how will a visitor



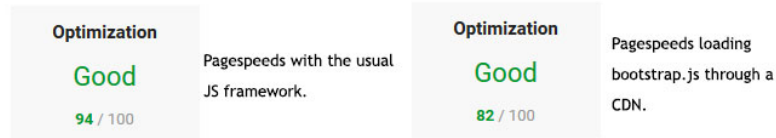
know what they can do? Designing buttons, [creating interactive content](#), and anything else you might want your readers to use in a way that makes it look and feel like an interactive piece of content is vital to the user experience on your site. Cascading stylesheets (CSS) is one of the easiest (and most widely adopted by users and browsers, alike) ways to accomplish this.

**Third**, and possibly one of the most important points, is the ability to leverage caching and decreased asset load times, thanks to mobile-first design. This ties back into the first point I mentioned earlier, but expands from content-based assets to scripts, stylesheets, and everything else that makes your website functional. Because mobile screens allow us to load only the content we absolutely want the user to view, with none of the fluff and filler, it allows us to selectively load JavaScript libraries and CSS documents based on screen size. [Mobile conversions are up 64% compared to desktop conversions](#), so being able to prioritize content and assets, we create the optimal user experience.

Mobile-first design allows you to dynamically load libraries at screen sizes that you need them, allowing you to have greater control over your pagespeeds.

Being able to dynamically include JavaScript libraries and CSS documents is a huge benefit of mobile-first design. Looking at some standard JavaScript libraries like jQuery and jQueryUI, these files require loading files that are anywhere from 1KB to 235KB (in the case of jQueryUI). Now, in 2018, we've come to know storage devices that hold THOUSANDS of times more data than these libraries, but forcing a computer to load the library into memory, and use it to execute functions and actions can be straining on a device that doesn't have very powerful hardware. Being able to selectively load these libraries can save time and save face, making for quicker webpages and an overall happier

visitor, and [increase pagespeeds immensely](#)—creating a better overall user experience.



One reminder on loading these libraries (in regards to pagespeeds)—although [Content Delivery Networks \(CDNs\)](#) are great for serving the latest version of a library—it requires the browser to request a resource from another server, which can drastically decrease your pagespeeds. If your webserver can handle it, it can be much faster to serve the document from the webserver that hosts your website rather than a CDN, or another external resource.

**Graceful Degradation:** the ability of a computer, machine, system, network, or website to function even when missing portions.

**Putting it all together**, mobile-first web design offers a path to a more unified, and easier to work with, user experience. Most of the topics before this one wrap into this general idea, so we’ve already covered a lot of the material. It comes down to a key concept: best practice says you want your user to feel like they can use your website efficiently to get whatever value they are looking for (information, products, services, etc.) regardless of what platform they’re on.

**Progressive Enhancement:** the process of emphasizing core webpage content first, and allowing less important features to fill in as screen sizes increase.

What does this mean in terms of mobile-first web design? Simply put, it means that your website needs to feel, look, and work fluidly between devices. Looking at the website design and development process from the flip-side, we see that as the screen sizes become smaller, we need to practice “Graceful Degradation.”

[Graceful degradation](#) simply means that we do our best to “degrade” the website as screens get smaller, while still capturing the core functionality. This means your website gradually removes content, animations, desktop-based JavaScript libraries and calls, and other features as the screen gets smaller.

While this practice is common, and works for many projects, it tends to allow pertinent content to fall through the cracks, or for the cool display you built for a website not have the same impact, since smaller screens don’t capture the same essence or simply cannot run the scripts behind it. The alternative to graceful degradation is the idea of “Progressive Enhancement.”

[Progressive enhancement](#)—the polar opposite of graceful degradation—means that as we progress to larger screen sizes, we enhance the website and fill it out with content, animations, and features we might not have built for a mobile device. In practice, this means that if we followed the information in the above steps, we should be putting the most important and user-engaging content on the screen first, and filling the areas around it with the less pertinent elements.

With all of these ideas wrapped into “mobile-first web design,” we see that a more consistent, easy-to-use website that shows users the information they’re looking for above-the-fold, creates a unified user experience across all platforms. As a web designer, your job is to create the optimal user experience, and mobile-first design helps you solve this task.

**Now**, that’s not to say that mobile-first design is the be-all and end-all of web design. It’s important to remember that, at the end of the day, you’re designing something for a business, product, service, or person. This design is meant to engage users and drive traffic throughout the website; and for businesses, it’s attempting to convert visitors into leads, into customers, into promoters of your brand. If your primary user base is still using desktop computers, and your mobile audience is smaller or less important to you, then you should probably consider whether or not mobile-first design is for you.

Remember: all business content creation on the web is to attract and convert your ideal audience into customers. Research your ideal audience, and tailor your content and site to them.

Furthermore, mobile-first design [tends to be more difficult](#) than traditional responsive design. When you design a website in the traditional sense, you have the whole toolbox, and all of the features to work with—the only restrictions being those given to you by the client you are designing for, and the limitations of your current hardware. When designing mobile-first, you’re hit with the limitations right off the bat. Limiting screen size ([as small as 240px wide, in the case of some Nokia phones](#)), content availability, and additional libraries to run can be a pain and needs a different approach than traditional design.

However, these limitations lead to the real reason mobile-first design wins: the ability to prioritize content. You don’t have the entire space to work with, so you’ll make sure your users see all of the information you want them to see, and less filler content. A mobile-first approach is probably the best bet for your company or brand when it comes to your web presence—but remember, the content you create (in this case, your website) for a business

is meant to attract your ideal audience. If your ideal audience isn't on mobile, this design practice might not be for you.

Even if mobile-first design isn't the right fit for your business, you shouldn't forget the importance of having mobile-responsive websites. Web elements should be able to resize with the window in a way that makes the user's experience as close to verbatim as possible across devices and screen sizes. The same concepts apply, even when not taking a mobile-first design approach: keep your content succinct and relevant to your readers, make sure that you easily identify pieces of your site that are supposed to be interacted with, and remember to design with the idea of mobile users [using "touch"](#) as their main input method.