

COLUMNS

3 lessons for mobile sites from the 2015 holiday season

March 14, 2016



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An examination of the best-performing mobile retail sites showed that these leaders should be commended for delivering strong performance speed, availability and reliability this past holiday season, especially under unprecedented traffic loads.

From the beginning of 2015 through the third quarter (Q3), mobile retail page weights steadily increased, leading to slower webpage load times. One would have expected a continuation of this trend in fourth quarter (Q4), with Web pages hosting more sales- and advertising-related content such as high-res images. The average page weight did increase slightly in Q4 (2.2 percent), but a number of sites avoided this trend and significantly improved their performance.

For the 10 fastest sites in our benchmark, webpage load time actually decreased by one-half second, down from 2.99 seconds to 2.44 seconds an 18 percent speed improvement. Overall availability also improved, despite some well-publicized outages, but sporadic issues often limited to specific locations or relatively short durations, so-called micro-outages affected a number of high-profile mobile sites.

These metrics suggest that mobile retail sites are prioritizing performance and leveraging basic performance optimization techniques such as using CDNs, using minimized JS, CSS and HTML, and avoiding landing page redirects as all of the five best-performing sites did.

These sites' success is allowing them to achieve the dual ends of delivering more content, while maintaining a strong user experience. But keeping control of that experience is a continual struggle as marketers add new technology and tools to enhance functionality and boost response, because every new element introduces a potential single point of failure.

When performance issues did crop up during the holiday season, they often highlighted this risk. Managing this risk represents mobile Web sites' biggest challenge in 2016.

Here are three key lessons for mobile sites to take away from holiday season 2015, as they look ahead to next year.

Monitor for micro-outages. These are outages that often last 20 minutes or less, are confined to particular regions, or affect only a subset of users. They frequently go unnoticed by site administrators, but they are highly visible to impacted end users.

In fact, marketing or support teams may be the first to find out about micro-outages as customers complain on social media or flood the call center to report the issue.

These limited outages can cause lasting damage themselves, but they can also be the first indications of far bigger problems. Catching them quickly can prevent a major outage from causing widespread damage.

During heavy periods such as the holidays, sites should increase their monitoring frequency, as well as making sure they are monitoring from the most comprehensive set of geographies as possible. This gives Web site managers the best, most comprehensive and truest representation of site performance, an opportunity to detect and fix even smaller-scale problems, ideally before end users become aware, and earlier warnings of more serious issues.

Be aware of the limitations of load testing. When Target's site went down, the retailer said it was due to unprecedented traffic levels. If Target can go down under heavy load, clearly no one is immune.

Based on the current trajectory of mobile shopping and browsing, mobile sites can only expect traffic volumes to increase during upcoming holiday seasons, so they will need even more comprehensive load testing that includes all external services.

Beware, though: Just because services met load testing requirements in October does not guarantee that they will perform flawlessly at a critical moment in November when they are handling peak volumes for lots of high-traffic sites.

Have a plan. Intensified performance monitoring is one key to managing this uncertainty. Planning is the other.

Immediately catching performance degradation of components such as tag managers or services such as CDNs before large numbers of users are affected is critical to maintaining control of the customer experience, but it will not avert a major problem unless teams know ahead of time how to respond.

Many have one or more playbooks to address all possible contingencies, so they quickly execute plans to swap or drop weak components or services.

Using multi-CDNs is an excellent example of this approach, enabling an immediate switchover if a service slows or fails.

Being prepared for a third-party failure does not reduce the pressure on marketers to test and evaluate the impact that every element of their systems has on mobile Web site performance, or to deploy measures such as asynchronous loading to manage them.

In contrast to synchronous loading where site elements are loaded sequentially, and one slow service or element holds up the rest of the site asynchronous loading "skips" over the bottleneck and allows the rest of the page to load.

Heading into a period of peak demand with high-performing, thoroughly tested systems and while also preparing for unpredictable failures will help marketers make the most of key seasonal opportunities in 2016.

OVER THE PAST several years, mobile sites have made great strides in delivering exceptional performance under the onslaught of holiday traffic.

But with consumers doing more shopping on mobile devices and becoming less tolerant of performance blips nothing can be left to chance, especially during critical sales periods.

Comprehensive monitoring for micro-outages, more intensive testing and detailed contingency planning will go a long way in helping mobile sites set a new standard for performance excellence in holiday season 2016.

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