SciVisum

SciVisum Black Friday 2015 UK mCommerce performance report

Website testing specialist SciVisum Ltd recently carried out a survey to monitor add to basket journeys of 10 leading UK eTailers over a 2 week period including Black Friday & Cyber Monday; on mobile (Android) browsers.

Executive Summary

Website testing specialist SciVisum Ltd recently carried out an mCommerce study monitoring the performance of leading UK retail sites for mobile shoppers, over Black Friday and Cyber Monday. Add to basket journeys to purchase electrical devices on 10 of the UK's leading retail websites were monitored for a 2 week period over the Black Friday weekend, on mobile (Android) browsers.

To place all eTailers on a level playing field, network latency was excluded from the monitoring. As such page delivery to an end user over a 3G , 4G or other network connection would be slower.

Despite mobile now being the browsing device of choice and accounting for 40% of online sales in the UK, the key findings reveal extremely poor availability, page delivery times and large mobile page sizes; as well as a large gap between the best and the worst mobile web performers in the UK eCommerce sector.

Over the holiday shopping period and particularly in the lead up to Black Friday/Cyber Monday weekend, UK websites need to prepare for demand from mobile consumers, or risk losing huge sales as a result of consumer frustrations.

It is clear that many UK eTailers still need to take control of mobile performance to take advantage of the opportunity.

The following retailers UK websites were monitored:

1. Amazon
2. Argos
3. Boots
4. Currys
5. Debenhams
6. House of Fraser
7. John Lewis
8. Littlewoods
9. Tesco
10. Very

Background

Online sales on Black Friday reached £1.07 bn, up 32% on 2014, according to data company Experian and IMRG, making it the biggest day of online shopping ever and smashing the £1bn mark for the first time.

Following large scale web performance failures last year, many retailers spread the load this year; beginning Black Friday promotions earlier, over the week leading up to Black Friday. Physical stores were less busy with consumers preferring to stay away and instead order from the comfort of their own homes.

Mobile is the preferred method for browsing accounting for 60% of all online traffic this Black Friday according to IBM. This year £495m was spent on smartphones and tablets on Black Friday amounting to 40% of all online sales.
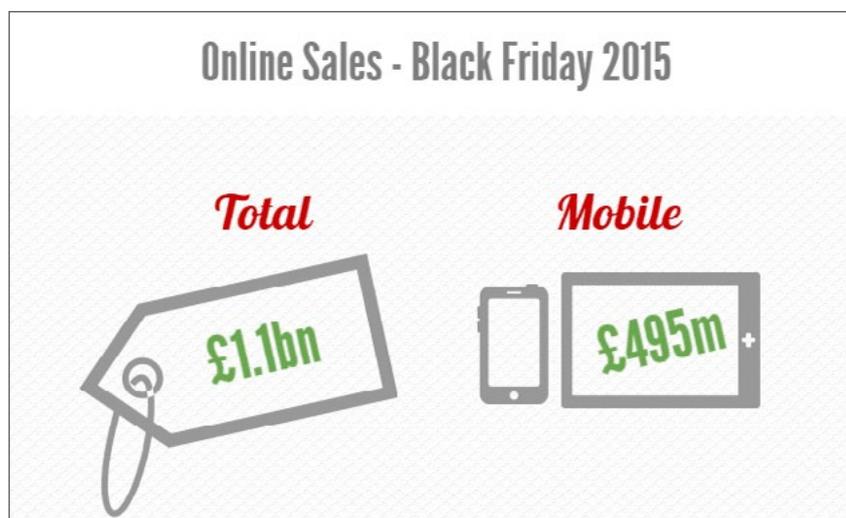
The Need for Speed

Mobile consumers have higher performance expectations than desktop users and delivering fast, available web performance across devices has never been more critical. Slow sites are a major cause of abandonment and moreso with younger consumers. 40% of people abandon a website that takes more than 3 seconds to load and 47% of consumers expect a web page to load in less than 2 Seconds.

1 second may sound like a short amount of time to most people but for retailers, a 1 second delay can have a significant impact on brand perception and bottom line. A 1 second delay in page response can result in a 7% reduction in conversions.

Recent research by Radware shows that even a 1 second delay in mobile page load times can damage conversions resulting in:

· increased bounce rates by 8.3%
· decreased page views by 9.3%
· decreased cart size by 2.1%
· slow pages driving mobile shoppers to the competition
· 30% of dissatisfied mobile shoppers refusing to return to a site

Research by Netbiscuits states that 91% of users experiencing problems will turn to a competitor's mobile site, to complete a task.
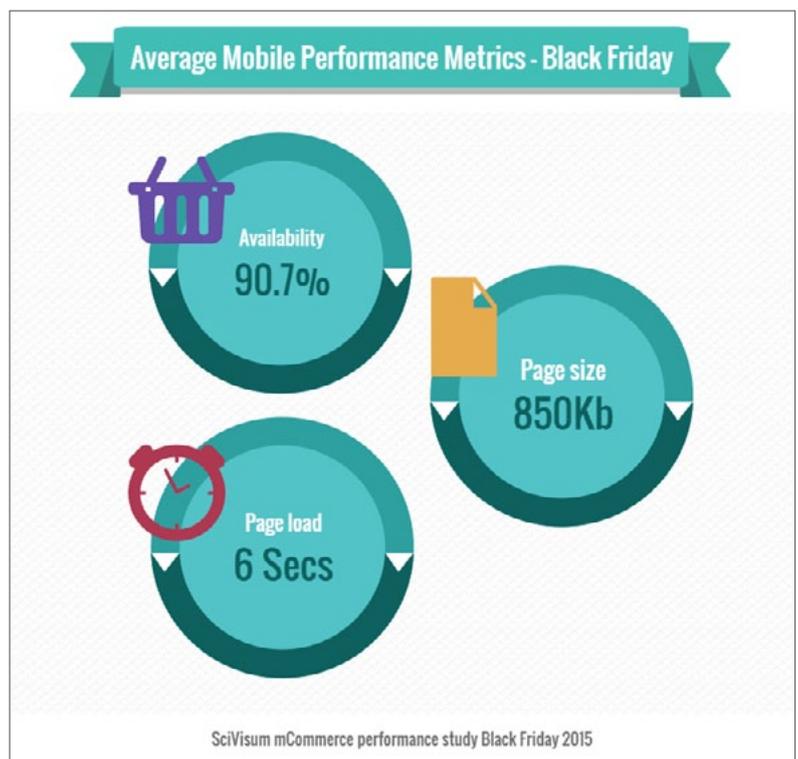
Summary of Black Friday Performance Metrics

The key findings reveal extremely poor performance as can be seen from SciVisum's monitoring portal Wallboard below; journeys were riddled with errors (red), warnings (yellow) and extremely slow samples taking longer than the cutoff threshold (purple) to complete.

Availability was down to 90.7%, page load times averaging 6 seconds and average page size 850Kb.

A large gap between the best and the worst mobile web performers in the UK eCommerce sector, was also apparent from the results.


Average Mobile Performance Metrics - Black Friday

Availability 90.7%

Page size 850Kb

Page load 6 Secs

SciVisum mCommerce performance study Black Friday 2015

Availability

Overall availability on Black Friday was **very poor:**
- **Average availability 90.7%**
- **Almost 1 in 10 add to basket journeys failing** as a result of errors which would prevent consumers completing their transaction.
- In monetary values an ecommerce site turning over £500,000 sales per hour lost sales **amounting to over £51,000 per hour or £1.2 million in a 24 hour period**.
- Cyber Monday availability was slightly better, averaging 94% across all sites.

Availability didn't recover to normal levels until a week following Black Friday. where it again began to average more than 98%.

**Average availability across all retailers - Nov/Dec 2015**
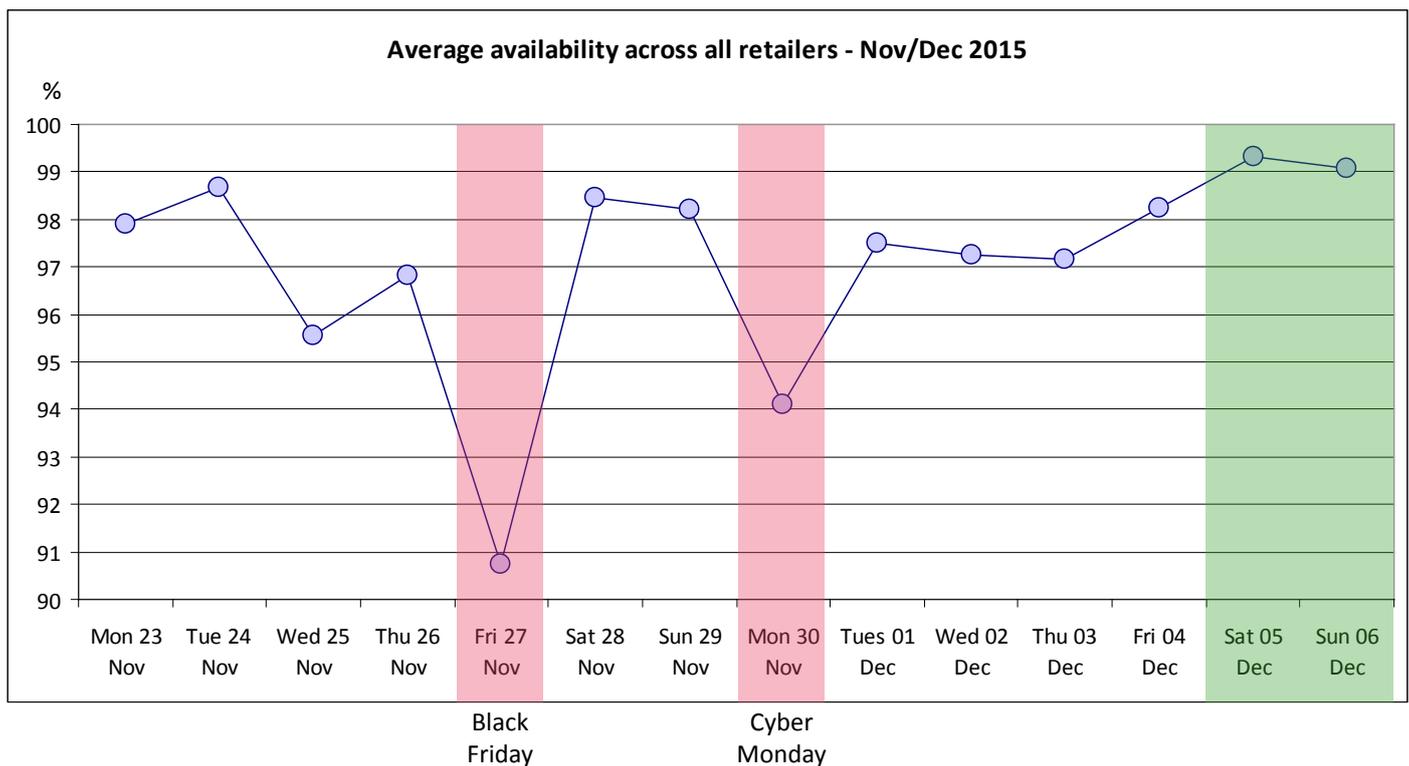
The gap between the best and worst performers was evident with the top two players for availability, Curry's and Amazon, achieving over 99% availability and the worst - a leading high street retailer - achieving less than 73%. 7 out of 10 sites achieved less than 95% availability on Black Friday.

Availability - Black Friday 2015

>99%

95-99%

85-95%

<85%

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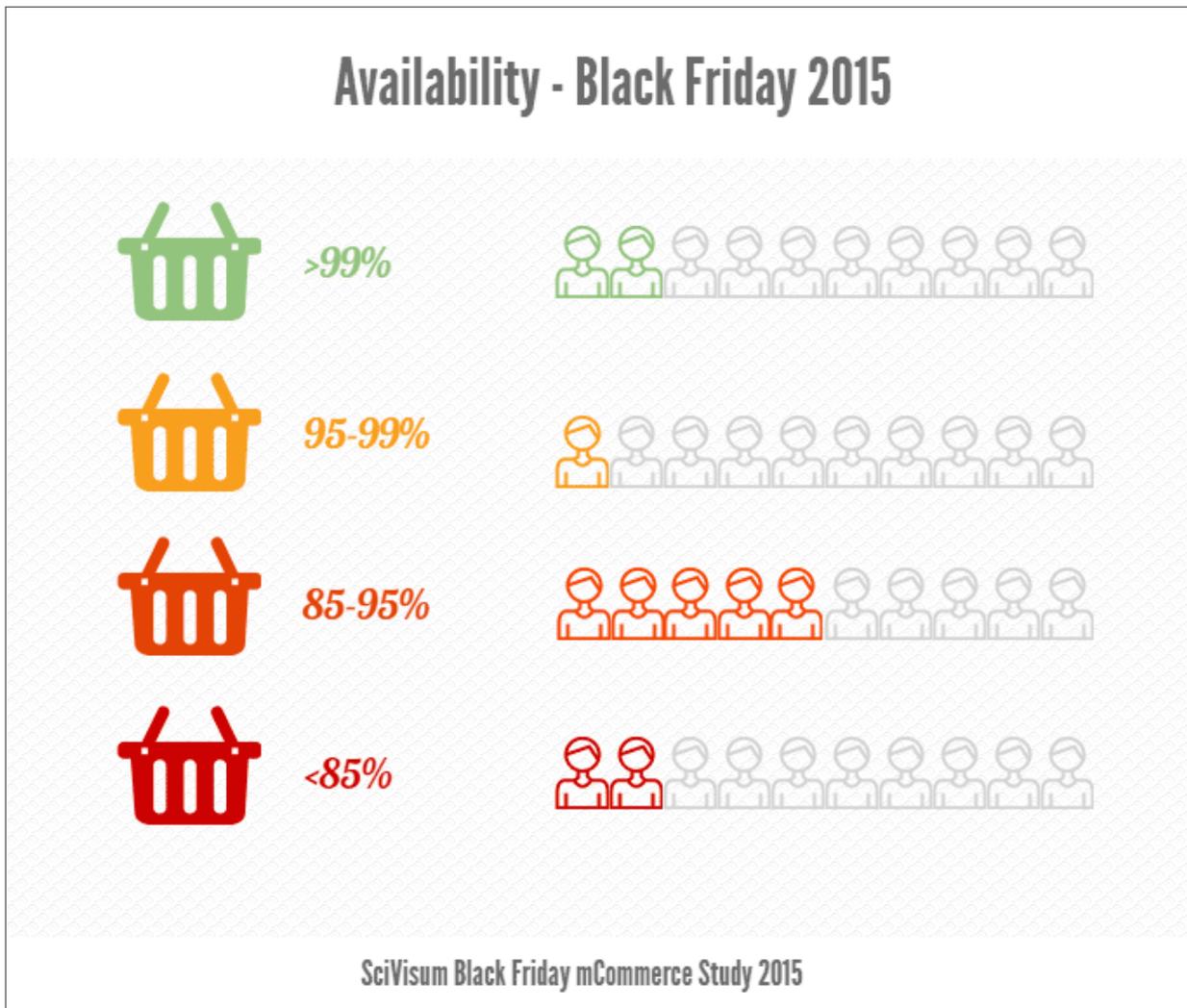
Page Delivery Times

Sites clearly struggled with traffic levels on Black Friday with a noticeable slow down in journey delivery times - almost 25% slower. Speeds were better on Cyber Monday, however one week on load times had still not recovered to 'normal' levels.
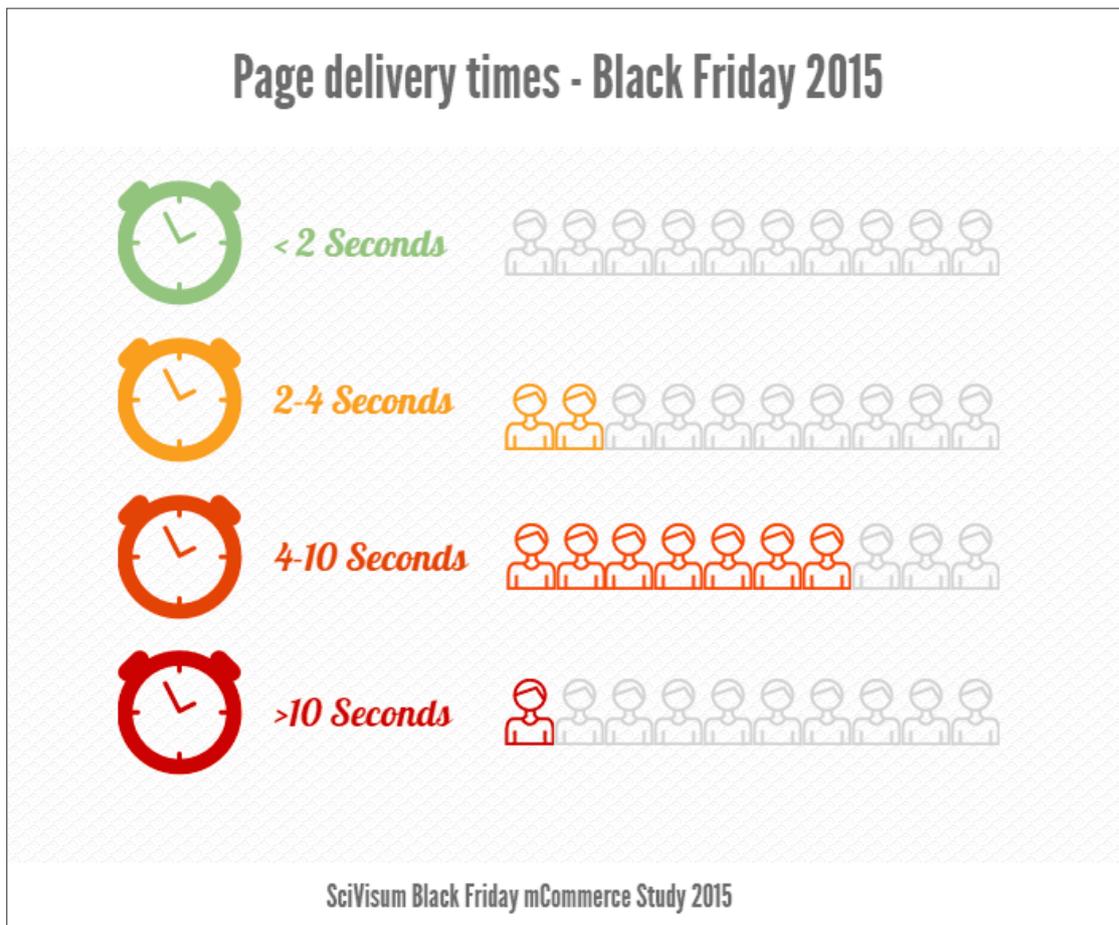
Average Journey Delivery Time - Nov/Dec 2015

Secs
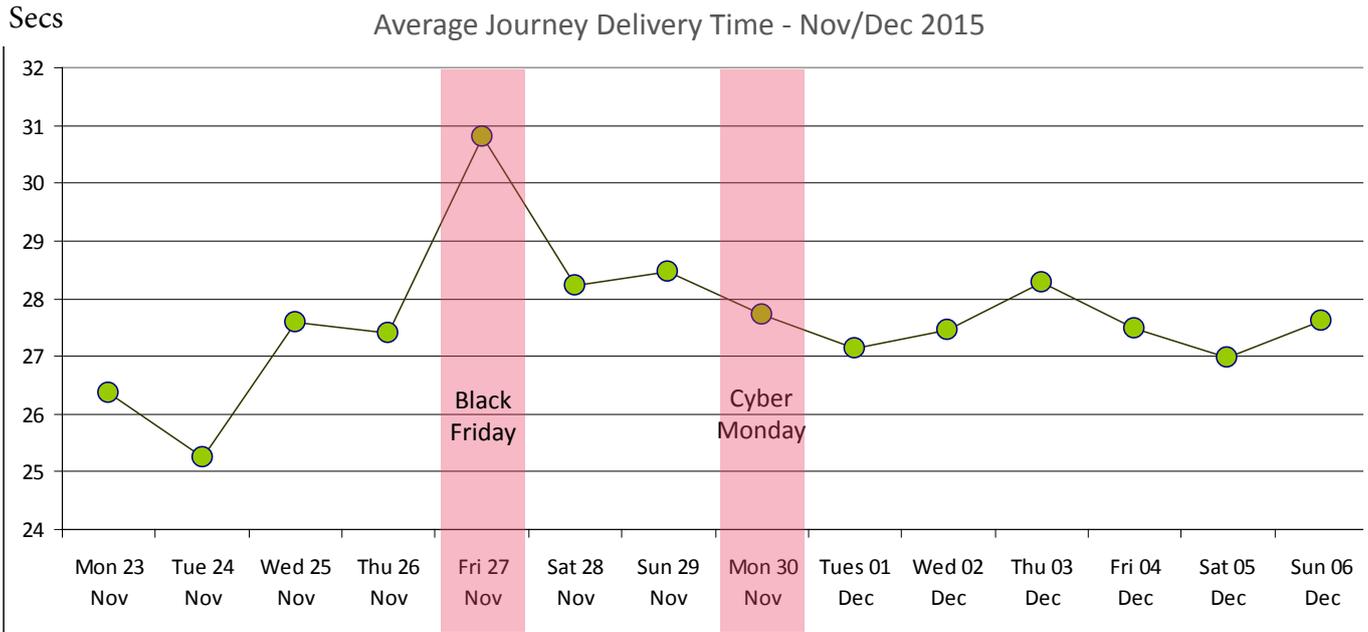
Hourly availability results for the day illustrate clear slowdowns as sites struggled at the busiest shopping times, at 10-11am and a later at around 4-5pm.Smaller peaks were evident in the early morning and evening.

Average Journey Delivery Time - Black Friday 2015

Secs
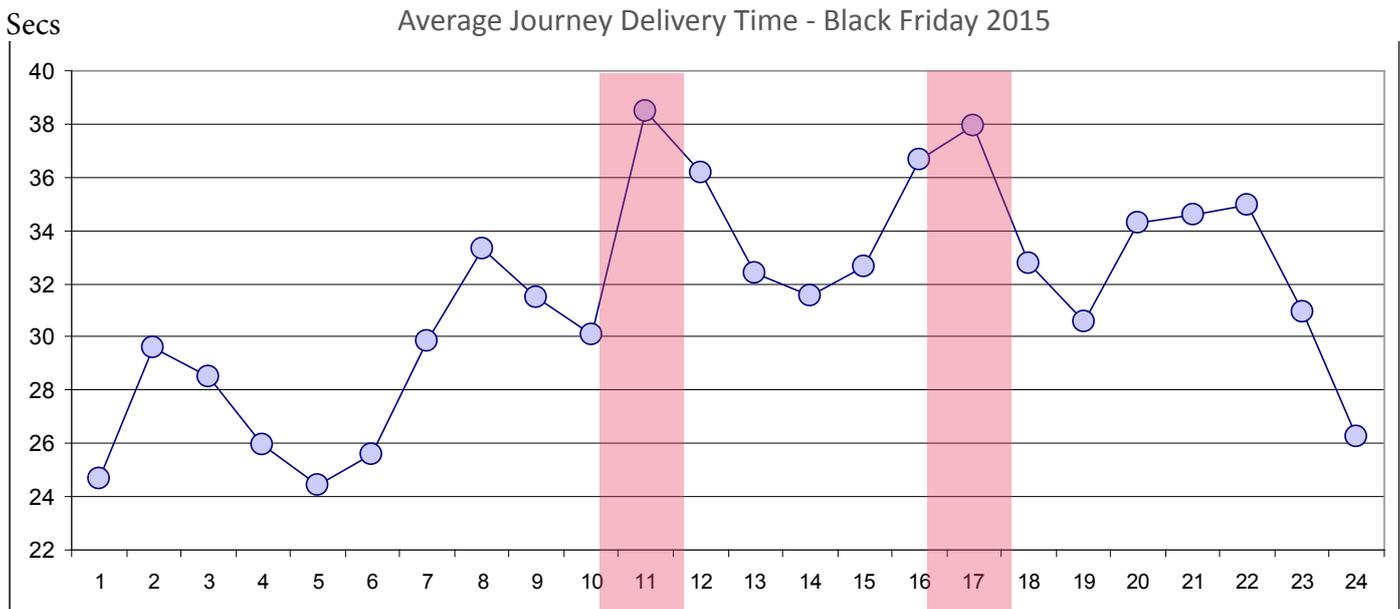
Google's expectation is for page delivery 'Above The Fold' in less than 1 second and 2 seconds is now a common consumer expectation for complete page delivery.

Page delivery times were poor on the whole with none of the sites delivering pages in under 2 Seconds. Two retailers achieved page load times in less than 3 Seconds - Boots and John Lewis.

The average page took more than 6 Seconds to load across all sites. Page delivery times across a wireless network connection would be completely unacceptable. In the worst case the average page delivery time was greater than10 seconds, quite shocking for a leading UK brand name. 8 out of the 10 sites took more than 4 seconds to load the average mobile page.

Page delivery times - Black Friday 2015

< 2 Seconds

2-4 Seconds

4-10 Seconds

>10 Seconds

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NB To make fair comparisons across eTailers and to minimise the impact of factors not directly under their control, page delivery times were monitored without throttling (network speed emulation). As such all page delivery times are faster than they would be on 3G, 4G or other networks.

The screenshot below taken from SciVisum's monitoring portal, shows the wide variation in delivery times between sites, with the best performers (lower down the graph) also delivering more consistent delivery times (denoted by straighter curves on the graph).

Black Friday

Page Size

Page sizes were very large for mobile devices, averaging 850Kb across all retailers with 4 of the 10 having average page sizes well over 1Mb. Too many page components, multiple images often not optimised and multiple calls particularly to 3rd party components were generally to blame.

Not surprisingly the fastest retailer's site - Boots, also had the smallest average page size of 286Kb, taking less than 3 Seconds to load. The worst offender had an average page size greater than 1.5Mb.
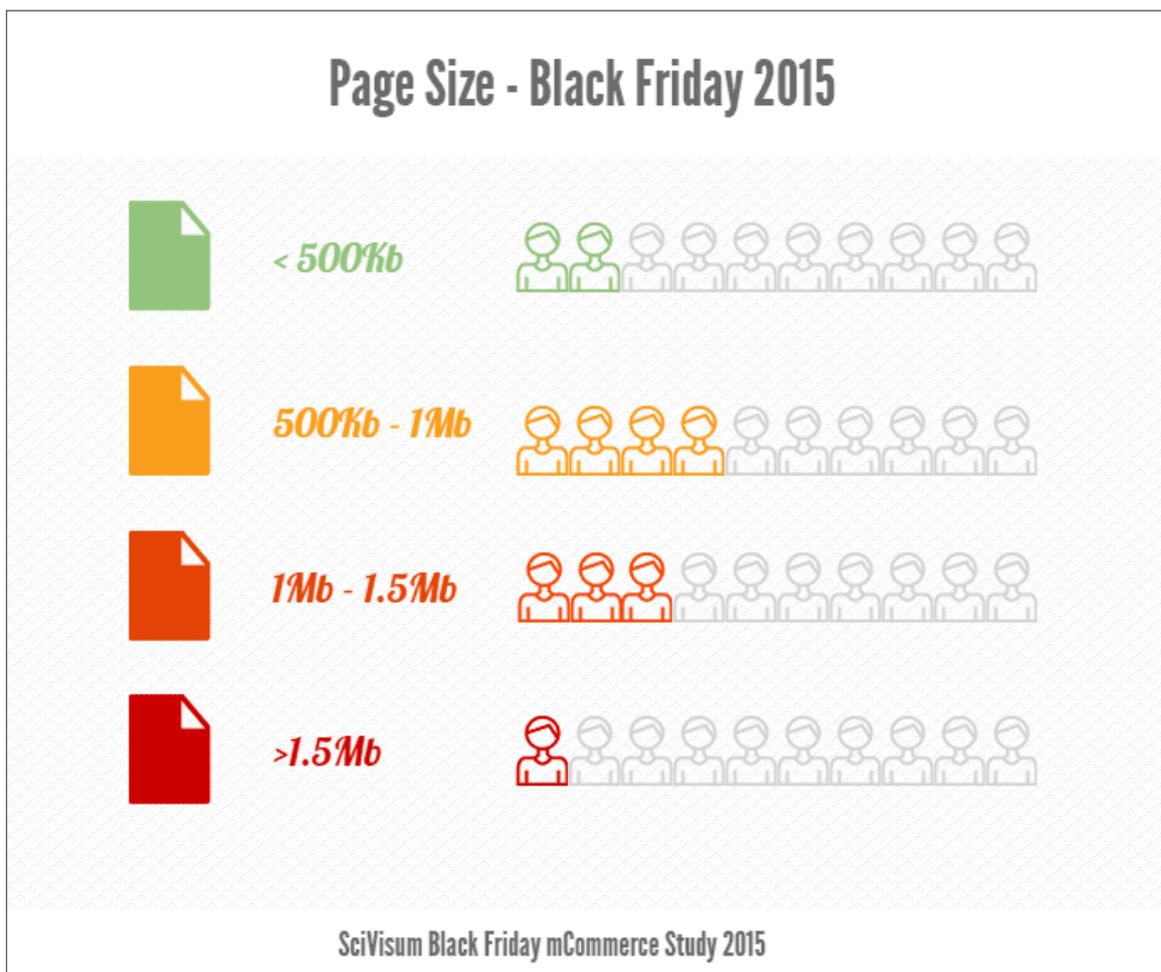
Journeys exceeding cutoff time

A cutoff threshold of 80 Seconds was set per journey above which journeys were considered to be in error. This is because it is expected that a consumer would not wait this long before going elsewhere to make the purchase. The percentage of journeys exceeding the cutoff measure more than doubled on Black Friday to almost 5% of journeys.

Two retailers - Amazon and John Lewis had no cutoff journeys but the worst two offenders had more than 10% of journeys exceeding the cutoff threshold.
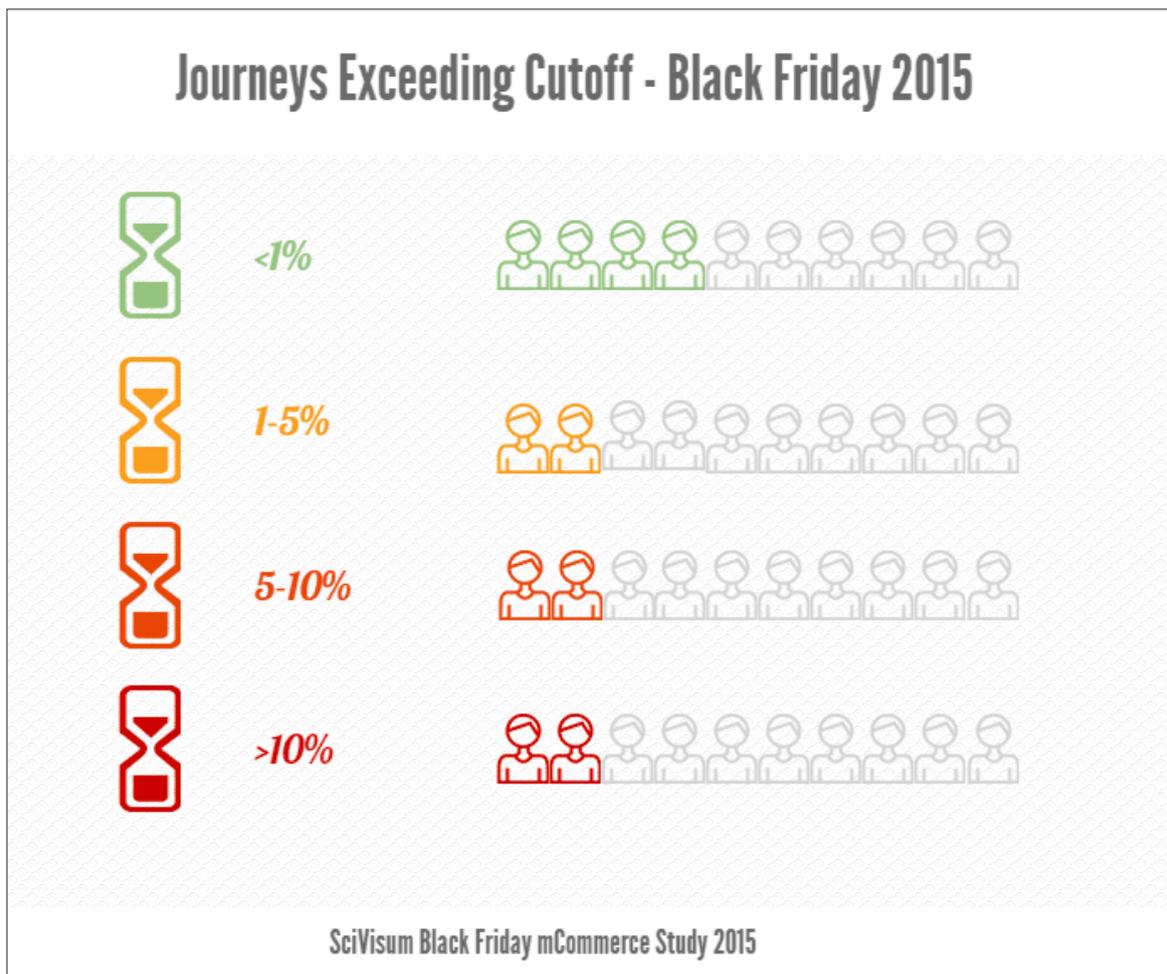
Common Performance Issues

Here are some examples of some common issues uncovered during the study:

1. Third party component failures
As well as retailers losing sales through lack of web capacity, many retail websites lost sales because 3rd party tools were not working properly such as 3rd-party tracking/big data services. For example we saw issues with yahoo advertising pixels, onsite remarketing tools and hotdeals.com tags slowing down journeys as they failed.

Many retail sites depend on these services and in many cases these will be the root cause of the lost sales as well as unreliable/confusing traffic data when trying to understand what went wrong.

2. Queuing at crucial times
Though not ideal virtual queuing can be a useful tool to control traffic at peak times however we saw instances where queuing was implemented at critical times for example when the user is in the basket and wanting to complete an order.

3. Missing critical content
Missing add to basket buttons, missing menu categories and empty categories containing no products. These issues though present on mobile devices didn't occur on desktop PCs showing there is a long way to go in terms of mobile testing.

4. Key functionality not working correctly
Scroll bars not working. Product pages reloading rather than taking the user to the add to the basket page when adding to basket. Items not appearing in the basket after being added. As above these issues though present on mobile devices didn't occur on desktop PCs.

5. Incredibly slow sites
Some sites were clearly struggling with traffic levels in the worst case a retailer with 11% of their journeys taking longer than our worst case cutoff threshold of 80 Seconds to complete a journey. Even more noticeable for users across mobile networks.

6. Online customer journeys not following best business practise.
In many cases customers were able to add out of stock products to the basket only to find further down the line that these weren't available. This is certainly not best business practise and very frustrating for end users, much better to inform of stock issues before adding to basket and prevent use of the 'add to basket' button when items are out of stock.

The Best Performers

Debenhams headed the league table with Boots and John Lewis amongst the top three performers. For specific metrics, Curry's came out on top for availability and Boots for page delivery times.

An overall ranking was given based on a weighted combination of availability, page delivery time, page size, journeys above cutoff threshold and journey consistency.

Top 5 Performers	
1	Debenhams
2	Boots
3	John Lewis
4	Littlewoods
5	Amazon

Takeaways

Despite many retailers running Black Friday promotions over a longer period to spread the load this year, mobile performance still leaves a lot to be desired. It seems that delivering a good mobile experience is still a way off for many, though it is clearly possible as illustrated by a minority of top performers. Possibly many retailers simply don't yet appreciate the risks of poor mobile performance.

When user journey problems occur on mobile the fallout is far greater than desktop. Mobile users are less patient and less tolerant. But with continuous visibility of mobile experience retailers can overcome this, to increase both conversions and customer loyalty.

As online shopping habits change and grow, ecommerce operators are having to respond and adapt more quickly, anticipating new developments and building ever-greater capacity to stay ahead of the curve. Here are our tips to help manage optimum performance at peak times.

1) Ensure journeys can support peak traffic with realistic load testing well in advance of busy periods. Any ecommerce site needs to include comprehensive load testing to ensure it can manage peak traffic demands but don't let traditional load testing lull you into a false sense of security. Ensuring optimum customer experience during flash sales and traffic peaks requires a shift to more realistic performance testing. To protect your business and your brand, load testing needs to reflect the increasing complexity and sophistication that ecommerce platforms now deliver.

2) Implement a third-party queuing system; it'll keep people off the site and could prevent a meltdown.

3) Stagger marketing and promotional activities to avoid creating spikes in demand.

4) Switch off any unnecessary functions.

5) Optimise your journeys as whole journeys not simply page by page. Keep page components to a minimum, optimise images and minify CSS and JS. What may improve performance for a single page won't necessarily improve performance across the entire journey.

6) Involve all teams in website performance; It's no longer the domain of the tech team. Bad performance equals reduced conversion rates and damages brand perception.

7) Stay on top of the experience your site is delivering by ensuring key user journeys are monitored 24/7 - from the customer down.

Appendix

Notes on testing methodology

- Monitoring was performed by SciVisum's 24/7 Mobile Web Monitoring service.

- The service emulates iPhone, iPad and Android users making complete journeys across your site, giving uniquely realistic visibility of your mobile experience. Journeys are sampled at 5 minute intervals.

- All testing took place on UK websites using test injectors based in the UK.

- No throttling was applied to results to present results across a level playing field.

About SciVisum Ltd

For over 10 years the UK's largest online names such as Debenhams, Boden, Joules and Currys have chosen SciVisum to take control of digital performance, maximise user experience and protect their brand. For those seeking a realistic measurement basis on which to base budget and planning decisions along with the support of expert insight, SciVisum are the number one choice for website monitoring and load testing services.

Our highly experienced team of test professionals help clients implement monitoring programmes and pro-actively oversee testing; automatically updating journeys as a website changes, highlighting performance issues and helping clients quickly pinpoint root causes - saving time and money.

To find out how SciVisum can help you implement the best monitoring programme to suit your organisation please contact us on 01227 768276 or visit our website at www.scivisum.co.uk

Related reports and guides available on the SciVisum website

'Back to School UK ecommerce performance report 2015'

'UK ecommerce performance report Easter 2015'

'Christmas 2014 ecommerce mobile experience report'

'Top 12 Tips for Xmas ecommerce performance'

'Meeting the challenges of modern website performance'

'Steps to implementing a holistic web performance monitoring programme'

'How to plan a successful Load Testing programme for modern websites'

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