



# Performance... It's for People!

Andy Davies · Sep 2019



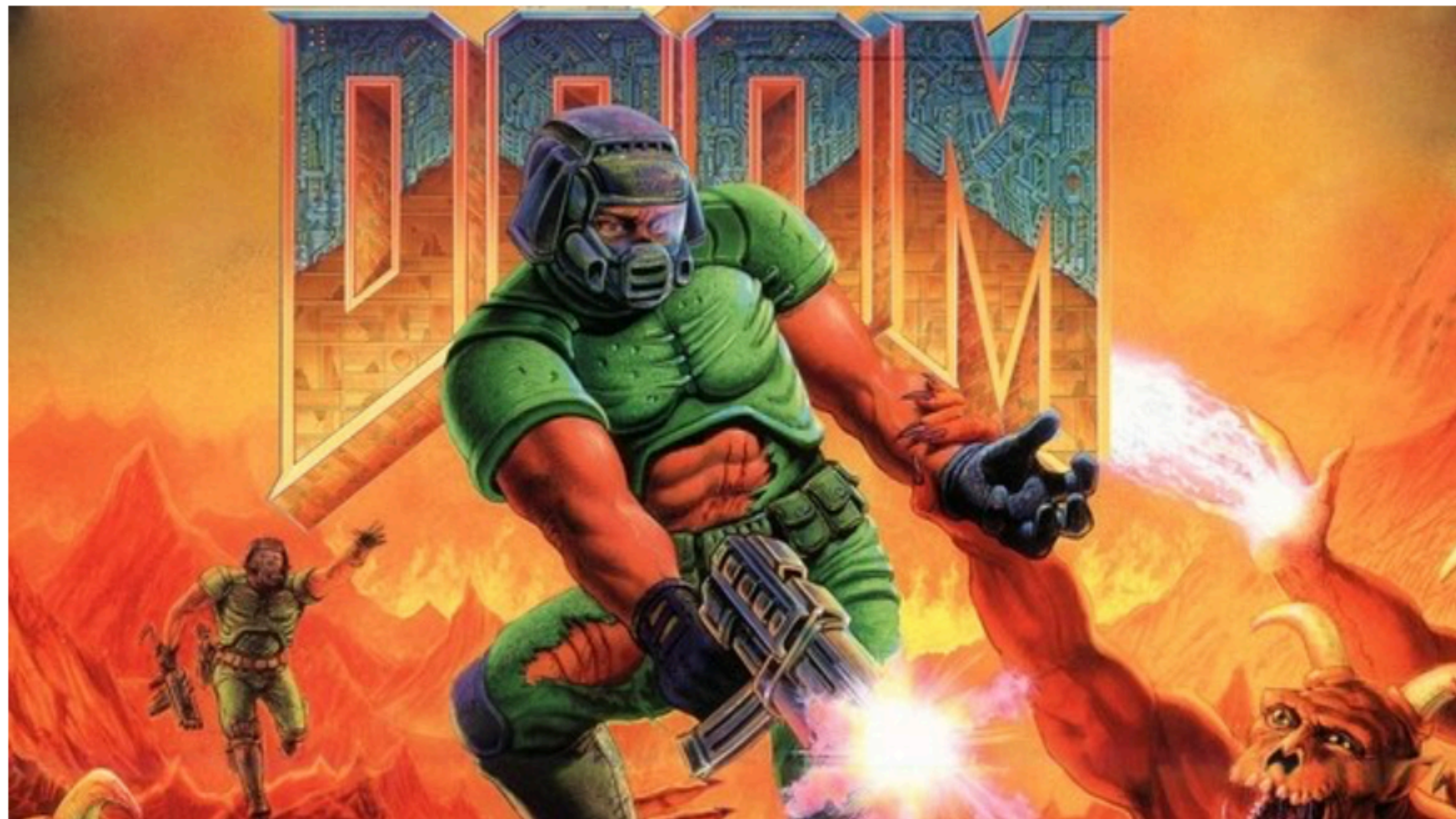
# We Proxy Metrics

Page Size · # of Requests · Lighthouse Scores  
# of Third-Parties · Resources Sizes etc., etc.



# And they make for great headlines...

## The Average Webpage Is Now the Size of the Original Doom



ID SOFTWARE

<https://www.wired.com/2016/04/average-webpage-now-size-original-doom>

@AndyDavies



Arnaud Delafosse  
@arnauddelafosse

Average file size of a web page (Dec '13): approx. 1.635 MB That's more data than fits on a floppy disk.

#performance



<https://twitter.com/arnauddelafosse/status/458796490606247936>





They're really useful as guard rails...

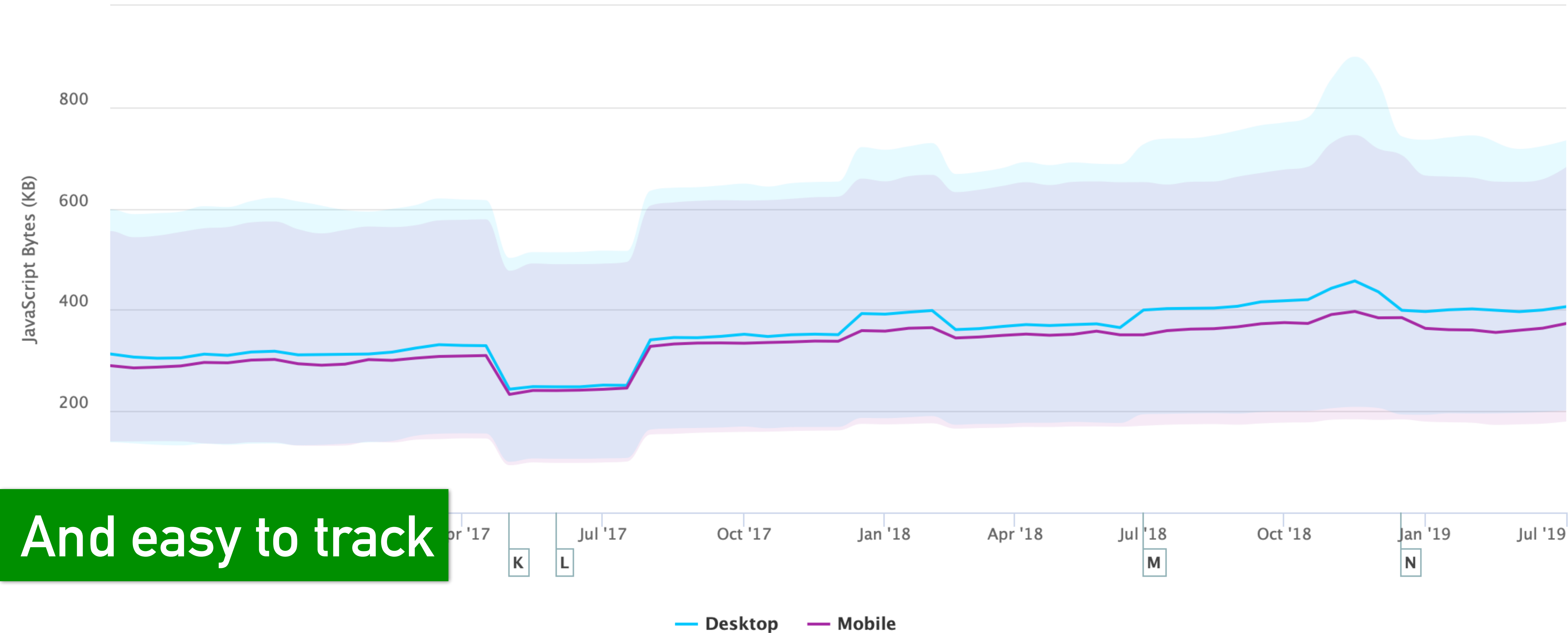


## Timeseries of JavaScript Bytes



Zoom 1m 3m 6m YTD 1y **3y** All

From Aug 1, 2016 To Aug 1, 2019



And easy to track

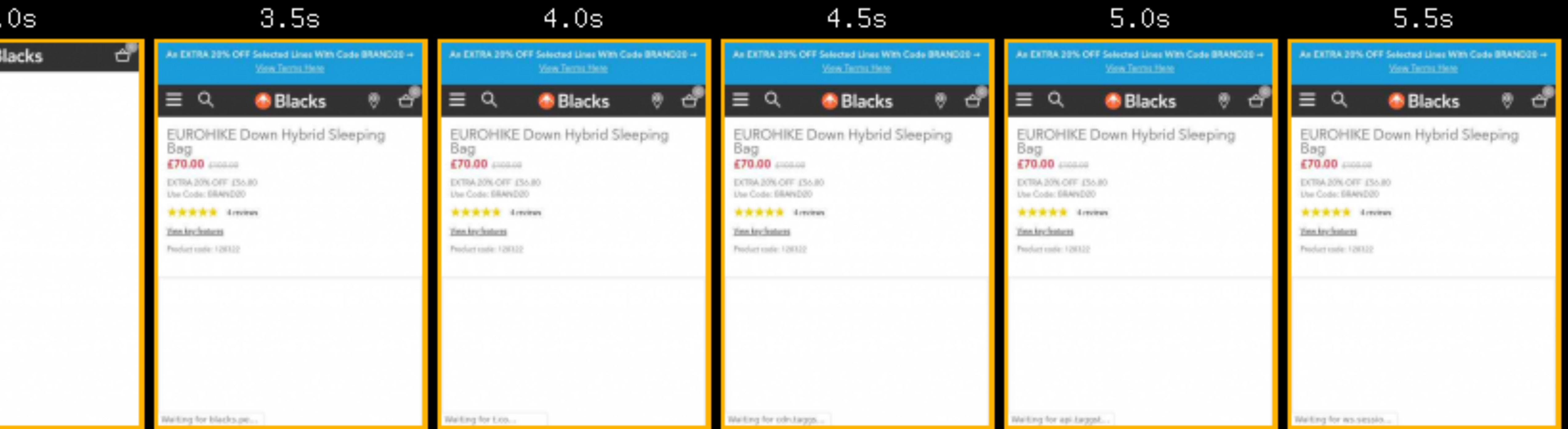


But ultimately... they don't represent our visitor's experience



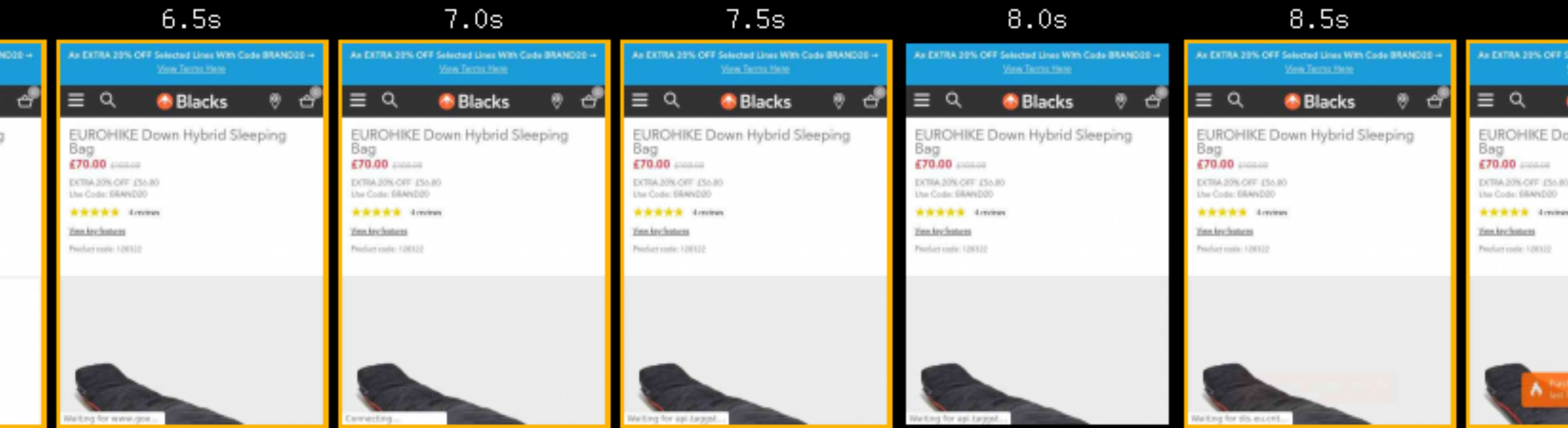


# But ultimately... they don't represent our visitor's experience



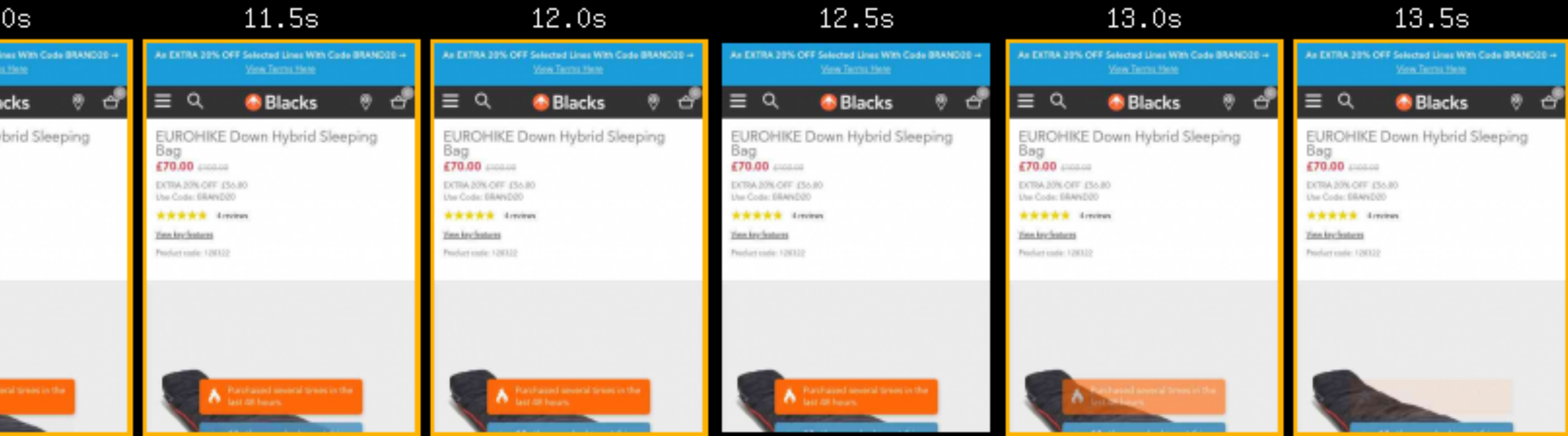


# But ultimately... they don't represent our visitor's experience





# But ultimately... they don't represent our visitor's experience



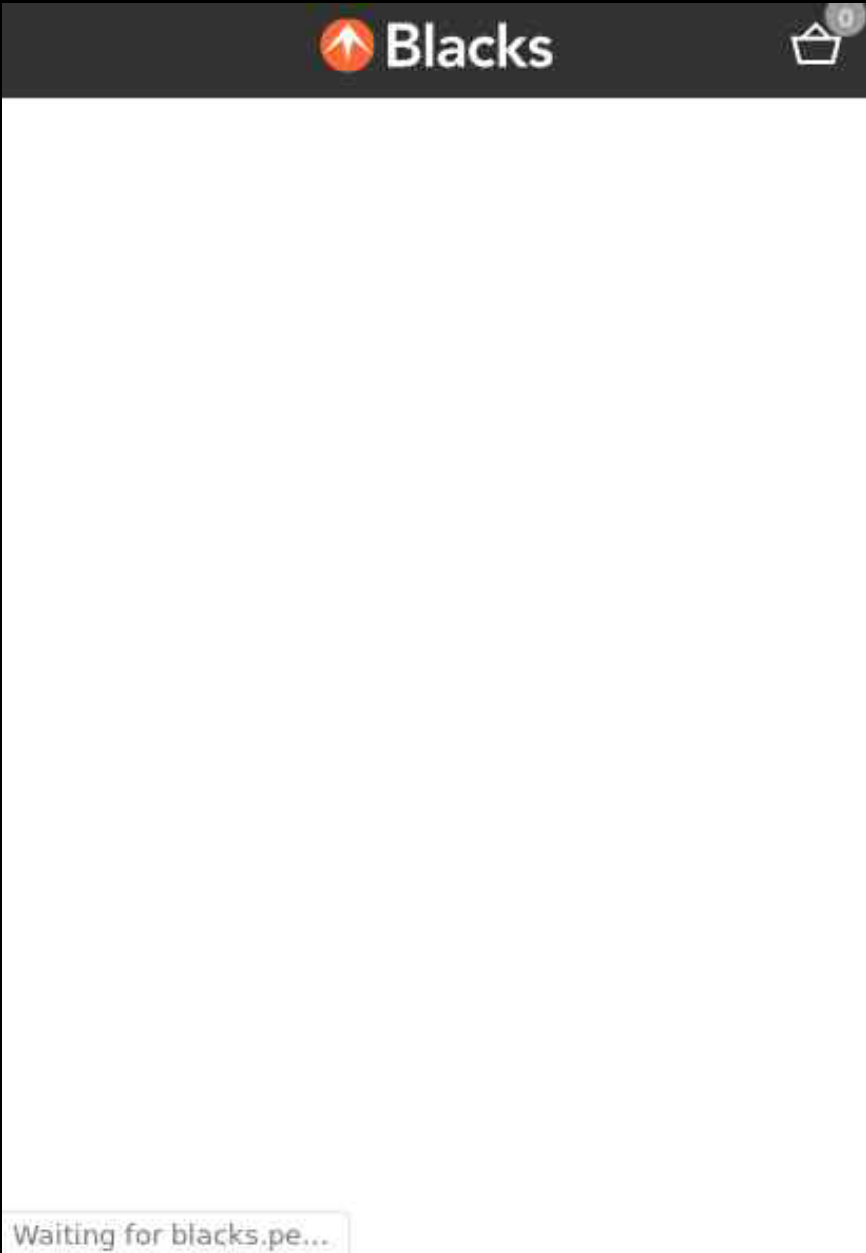


# Page load is a journey... with milestones along the way

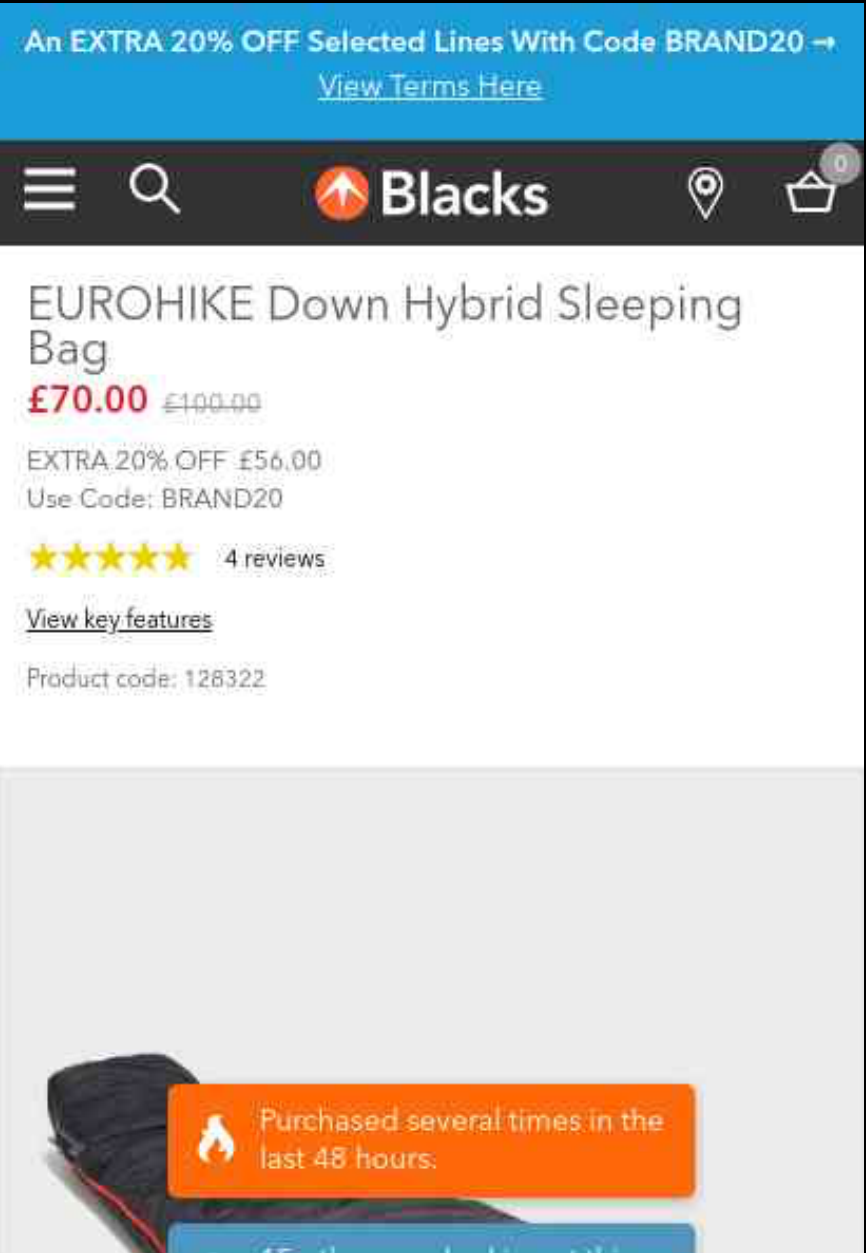
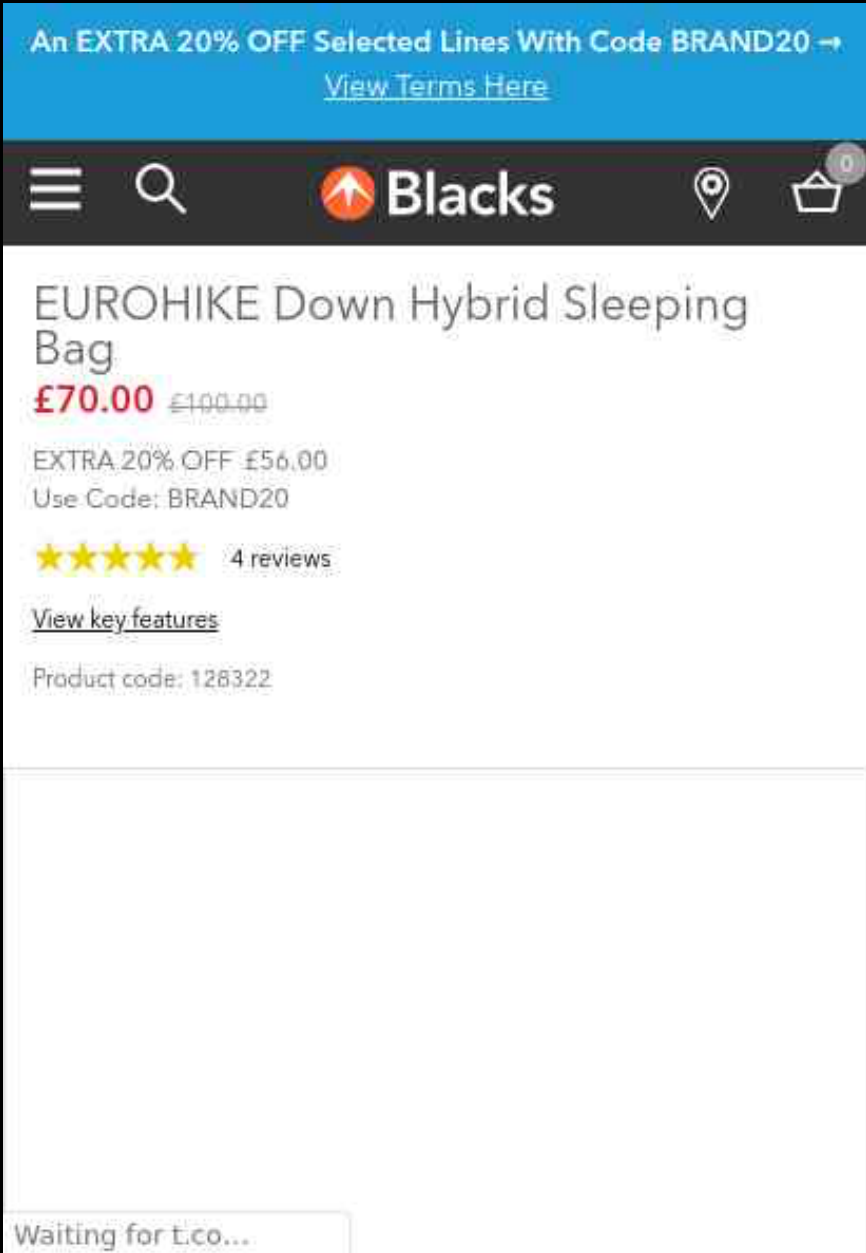
Working?



Useful?



Usable?





Control the journey... Choreograph your content...





# Understand and control what affects the milestones

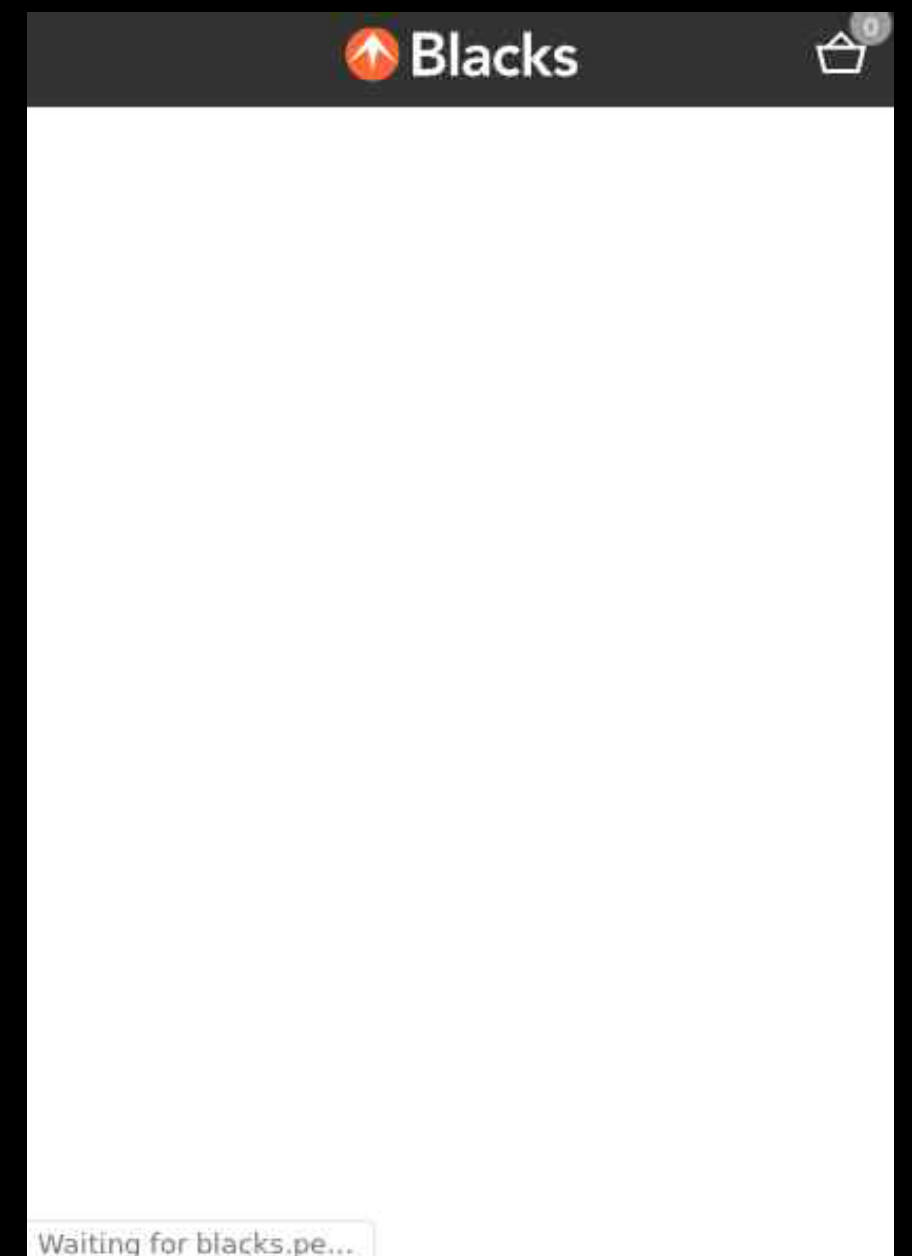


Title bar first real visual indication of navigation

How long does the server take to respond?

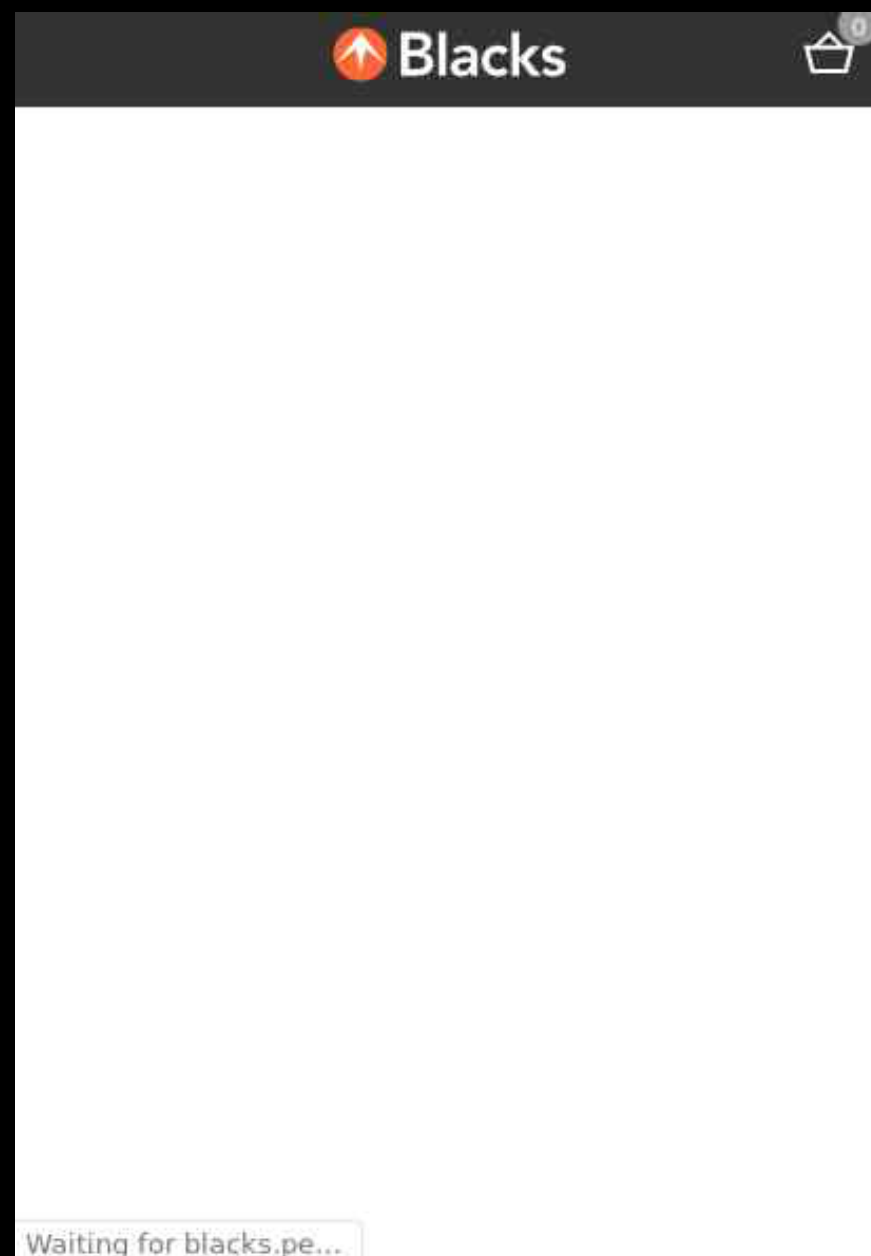
Visitor relies on cues from the browser / device until `<head>` is processed

What's needed to get this point?





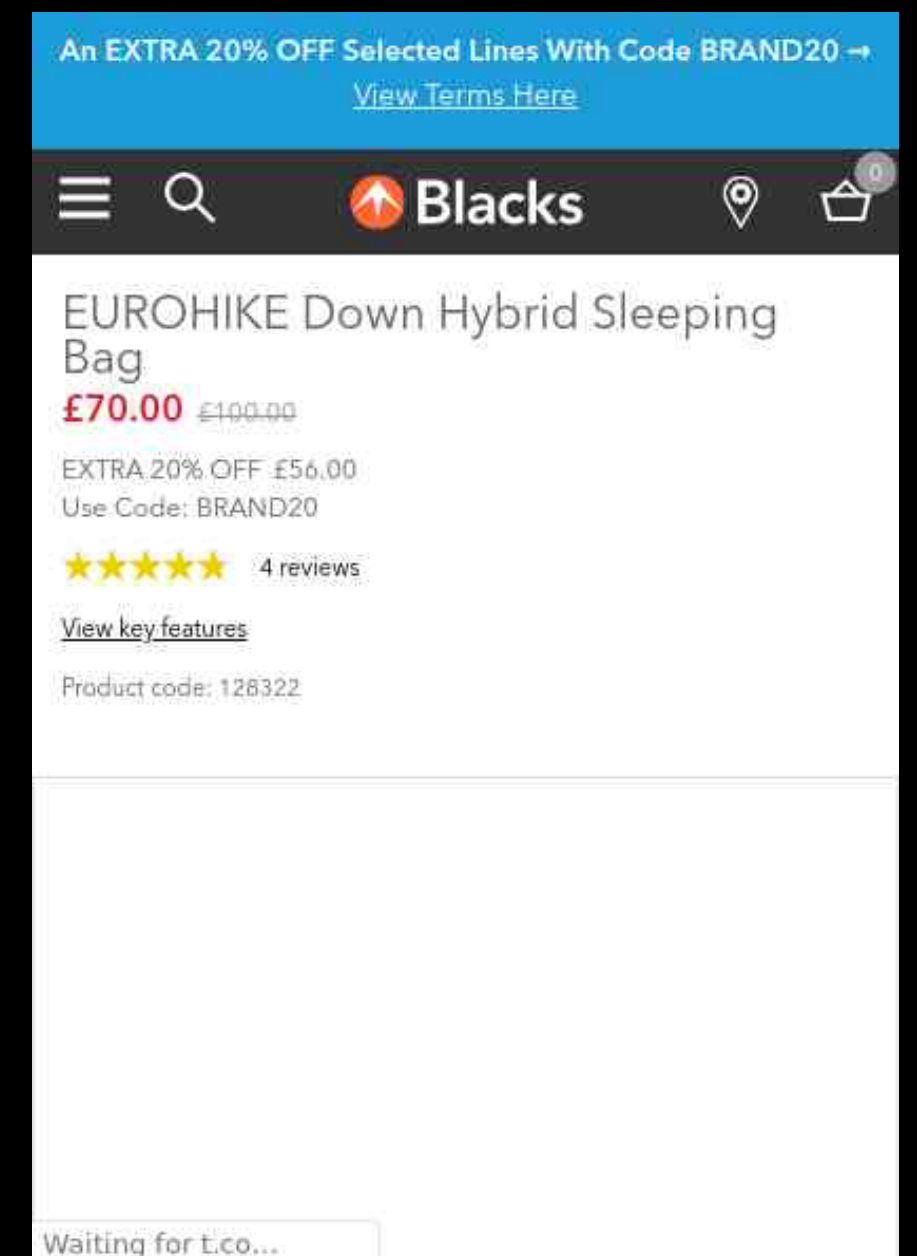
# Understand and control what affects the milestones



Prioritise the most important content

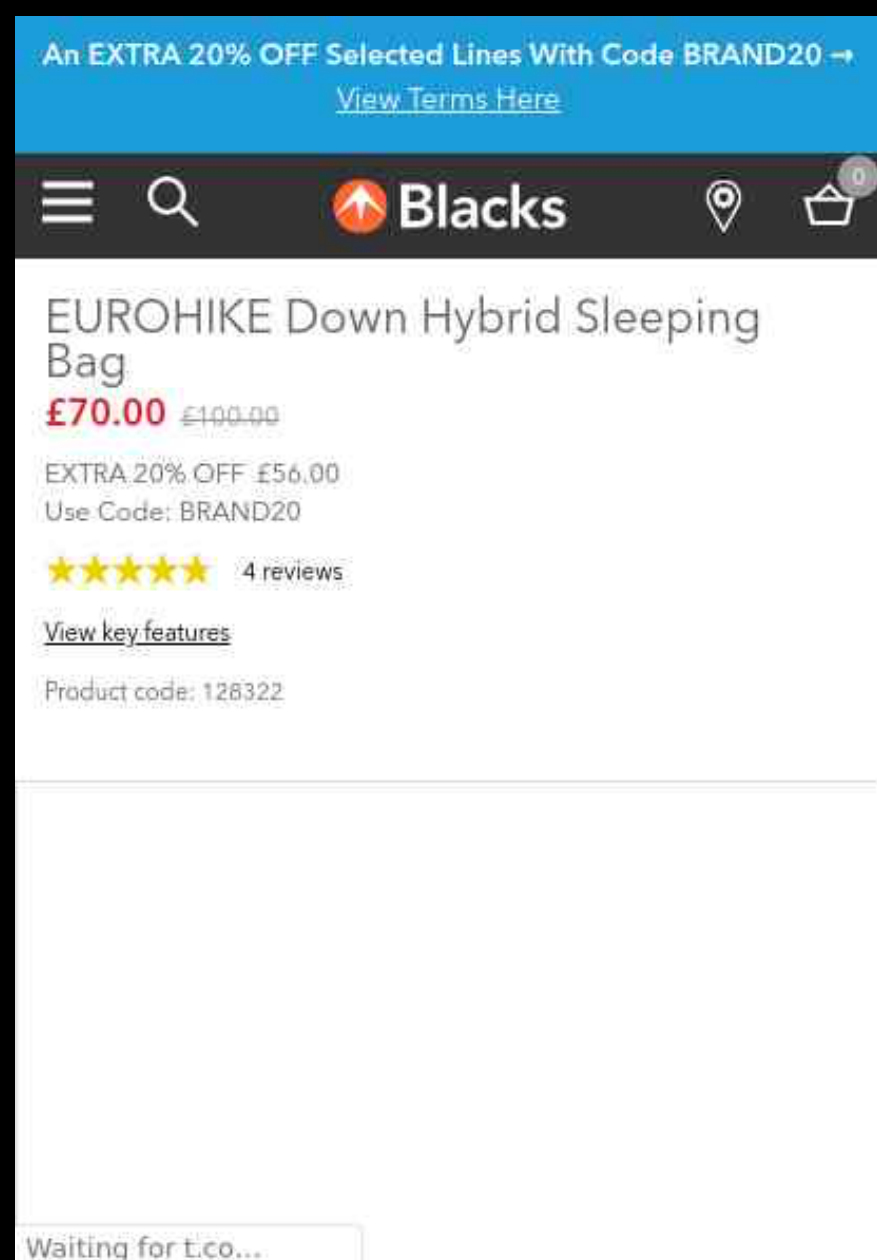
When does it start to appear?

What's delaying it?



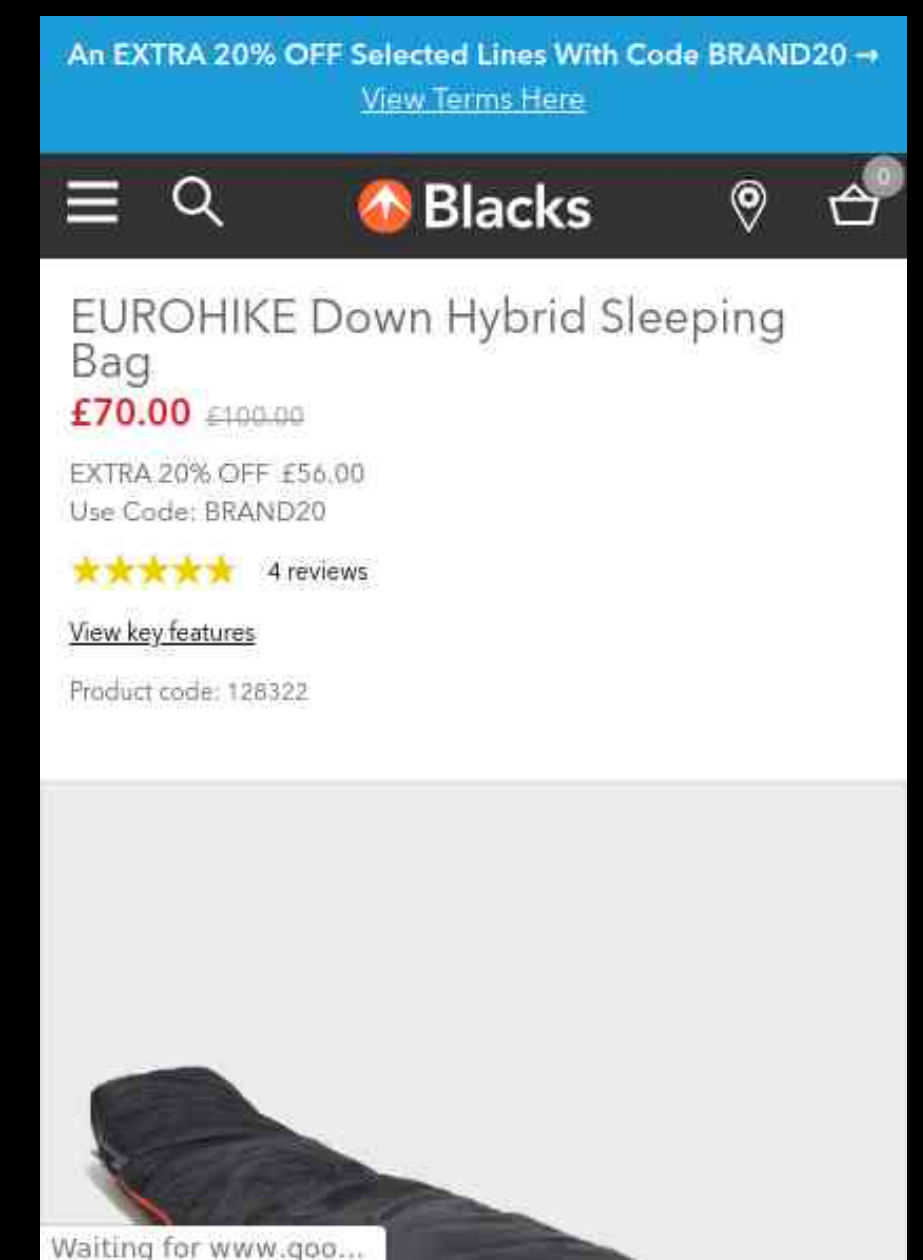


# Understand and control what affects the milestones



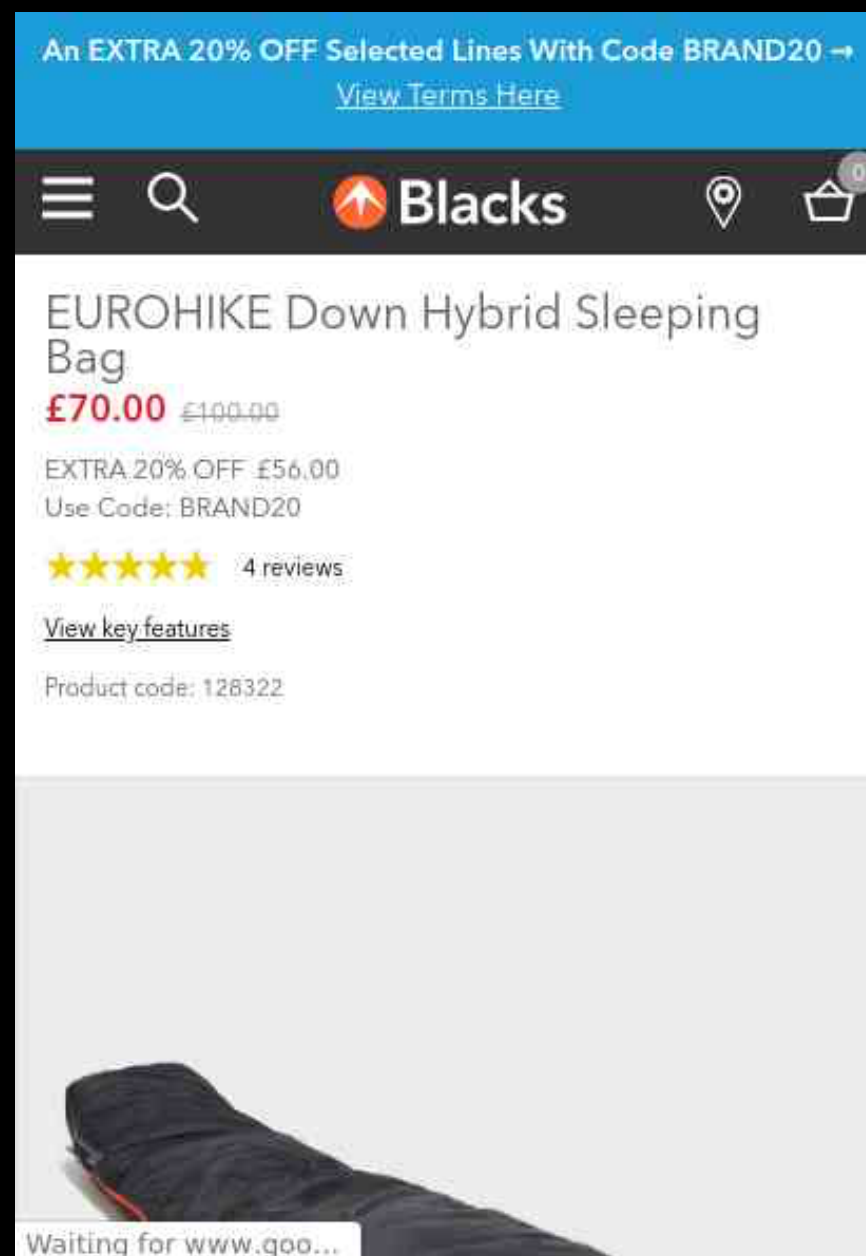
Why does the image take so long to appear?

Perhaps it's lazy loaded?





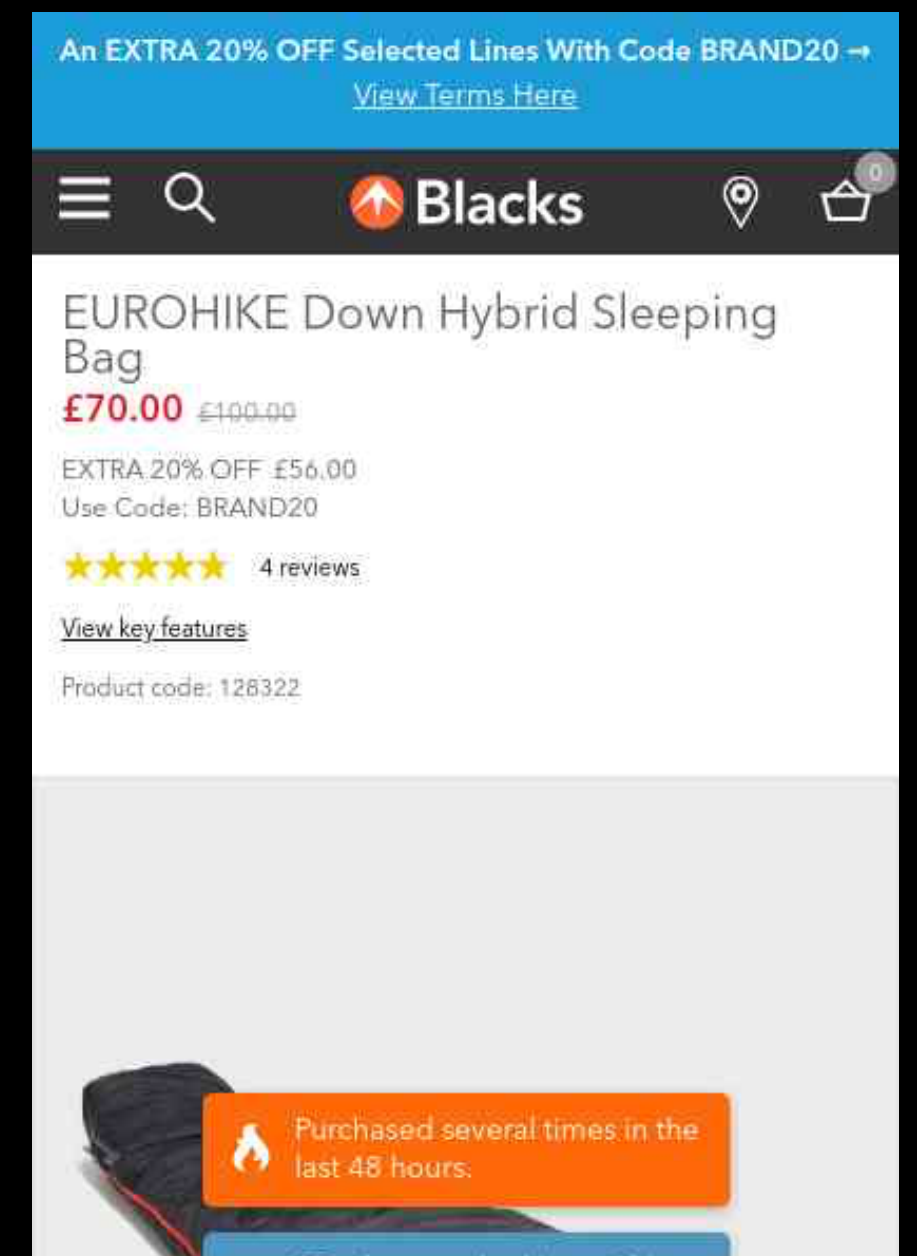
# Understand and control what affects the milestones



Are those 3rd parties really required?

Can their load be delayed?

What's their impact on when the page becomes interactive?





Remember everyone's journey will have differences





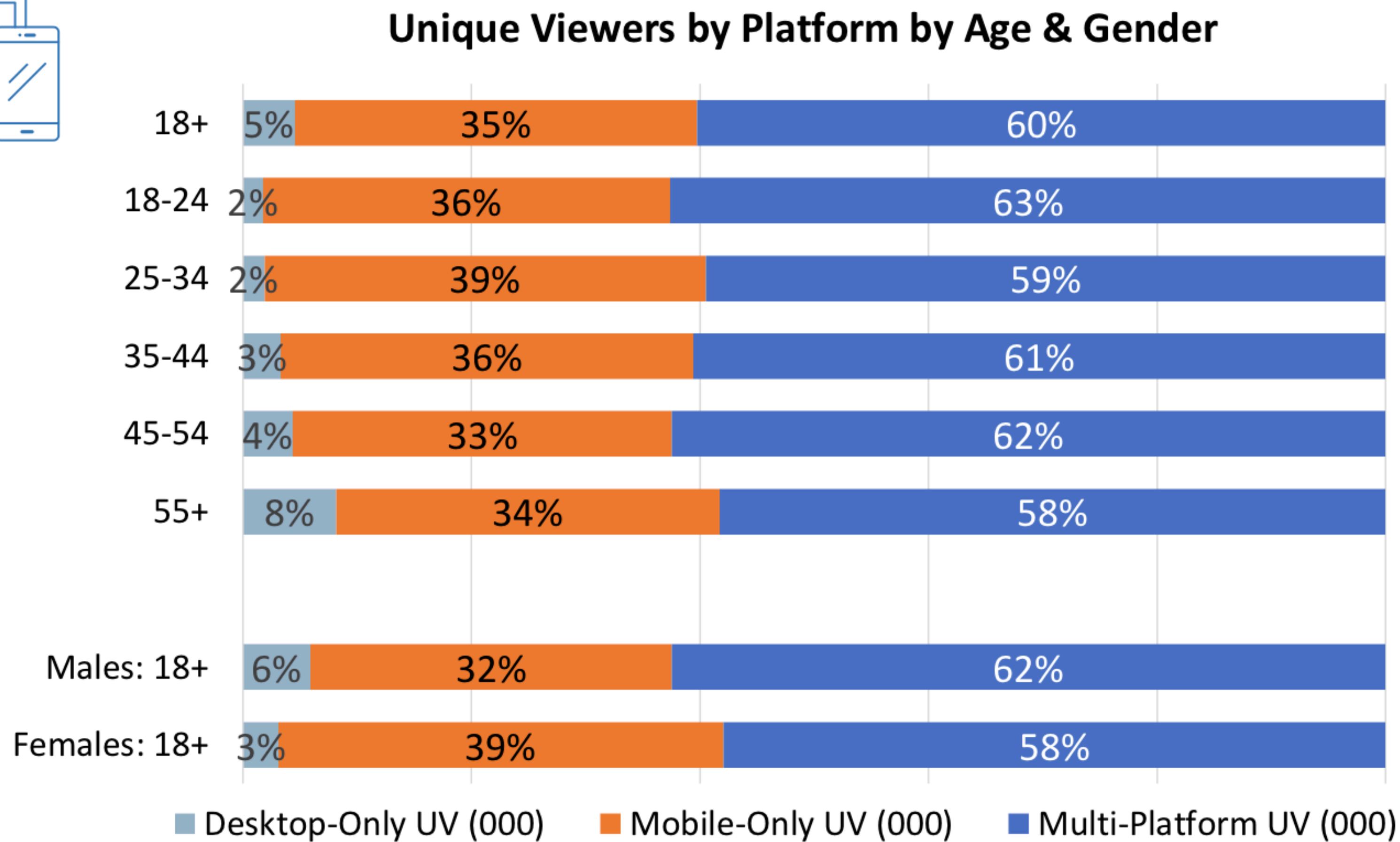
Not all parts of that journey are within our control

Visitor's "choose" their own browser, device, network

They're constraints we need to design for

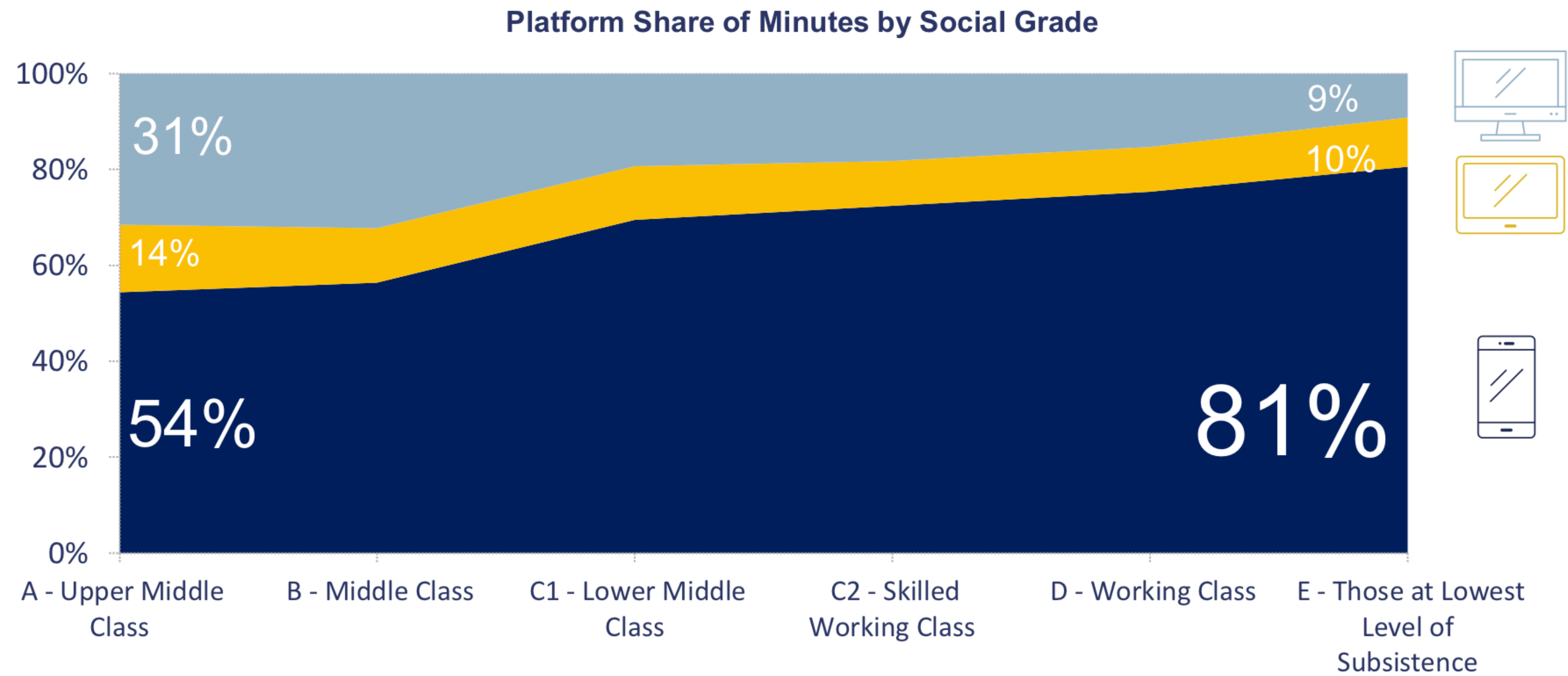


# Increasing, we're living in a mobile world





# Sometimes, for economic reasons

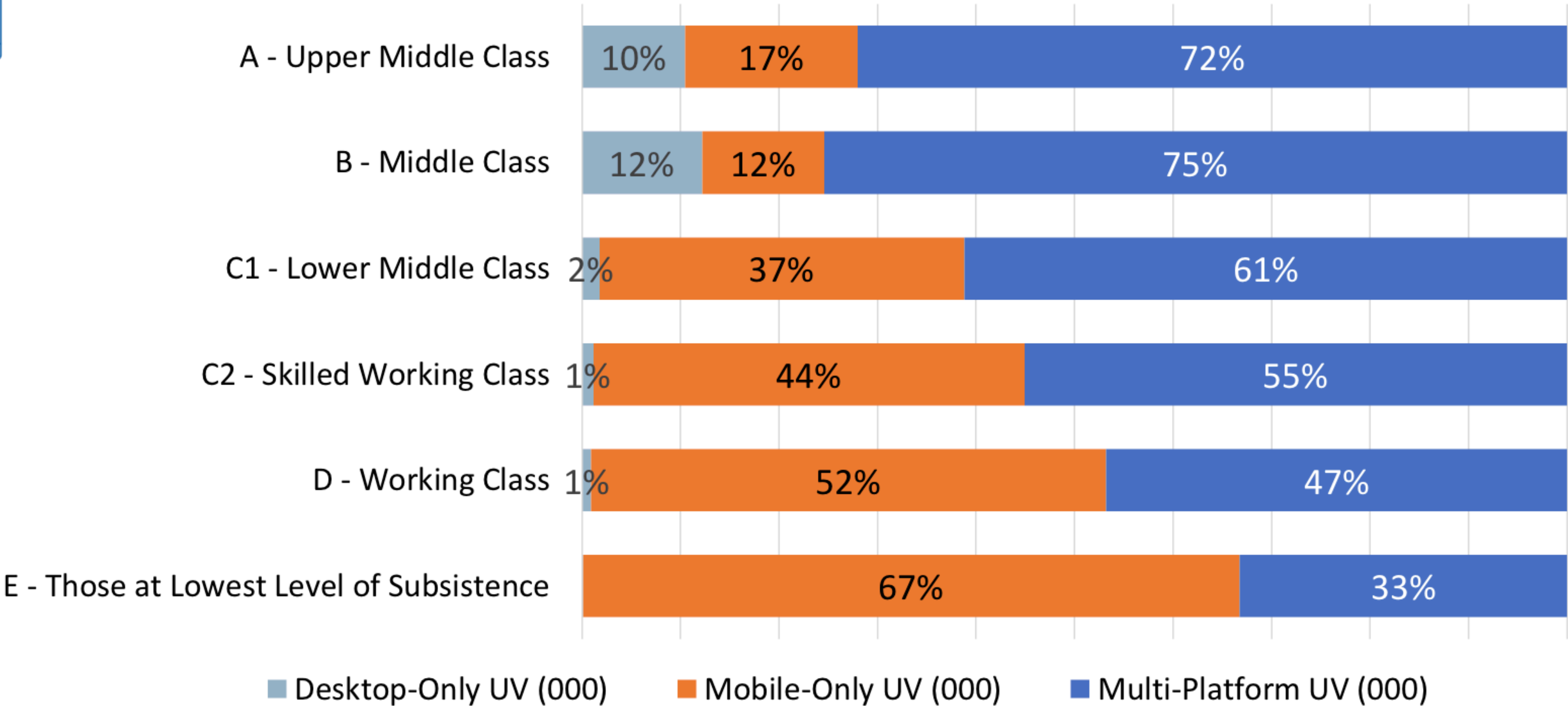




# But the trend isn't limited to just those on lower incomes



Unique Viewers by Platform by Age & Gender





**We're still designing and building for desktop!**





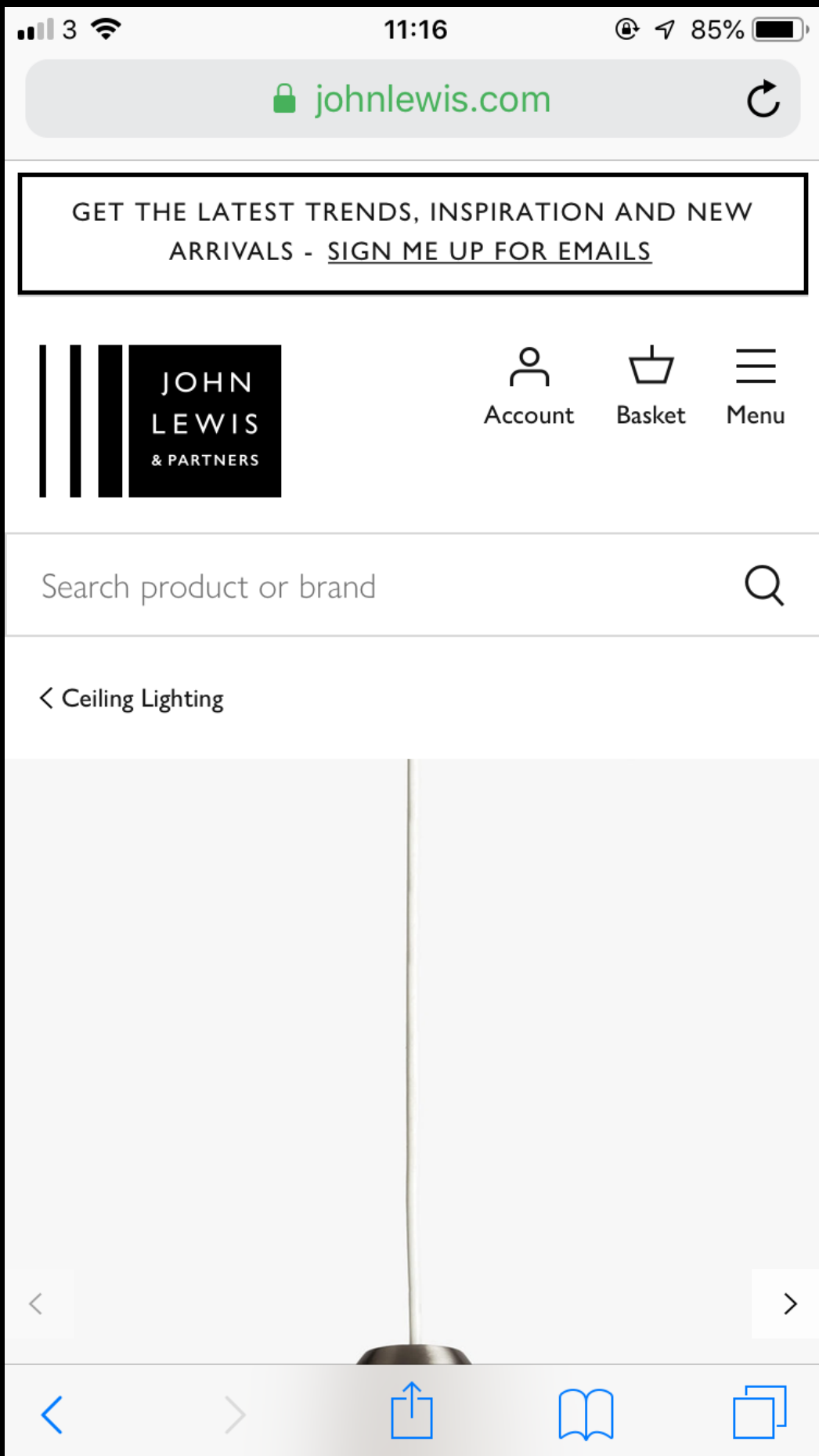
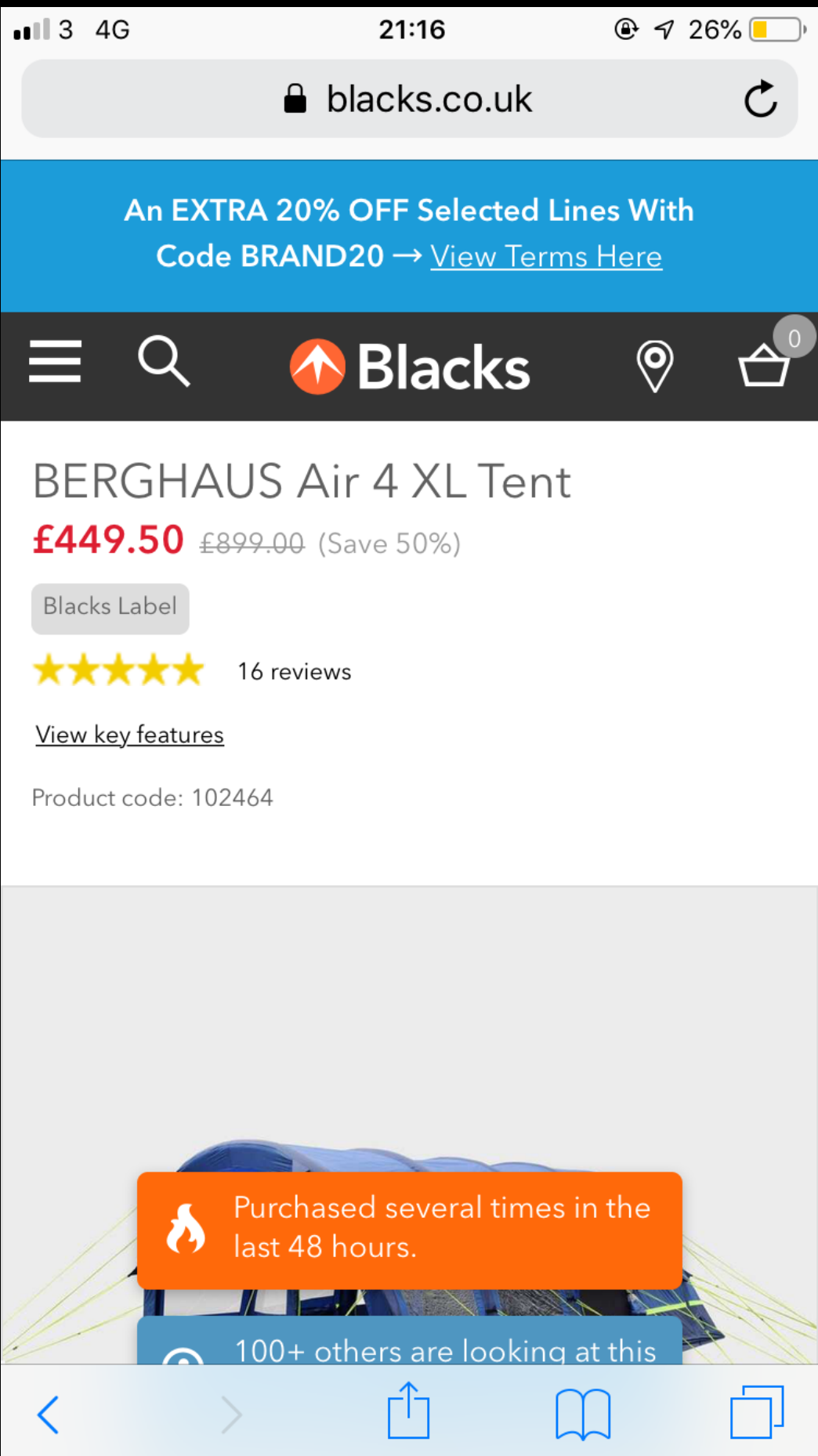
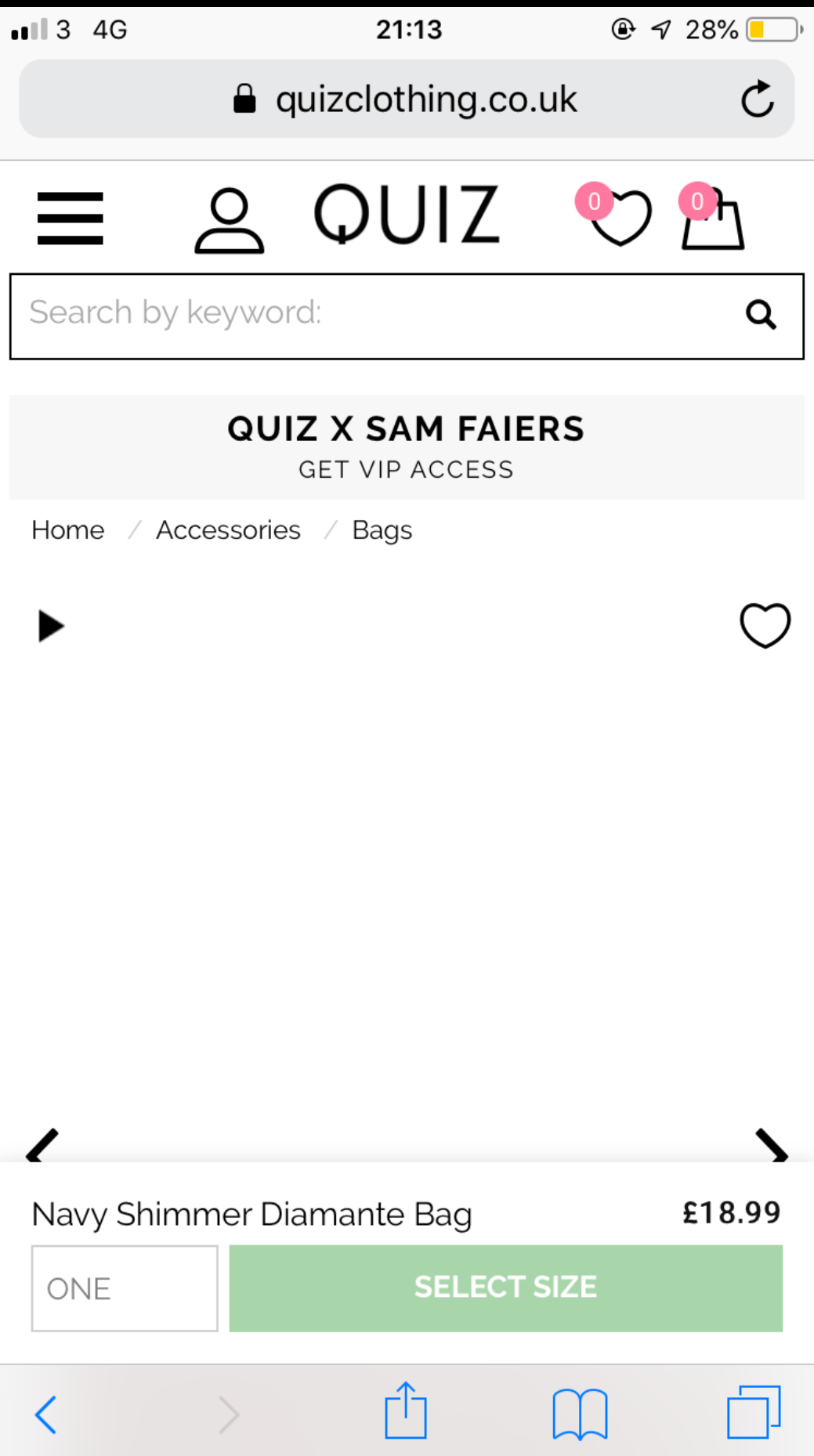
And then trying to shrink the experience to fit mobile



(and it's not working well)

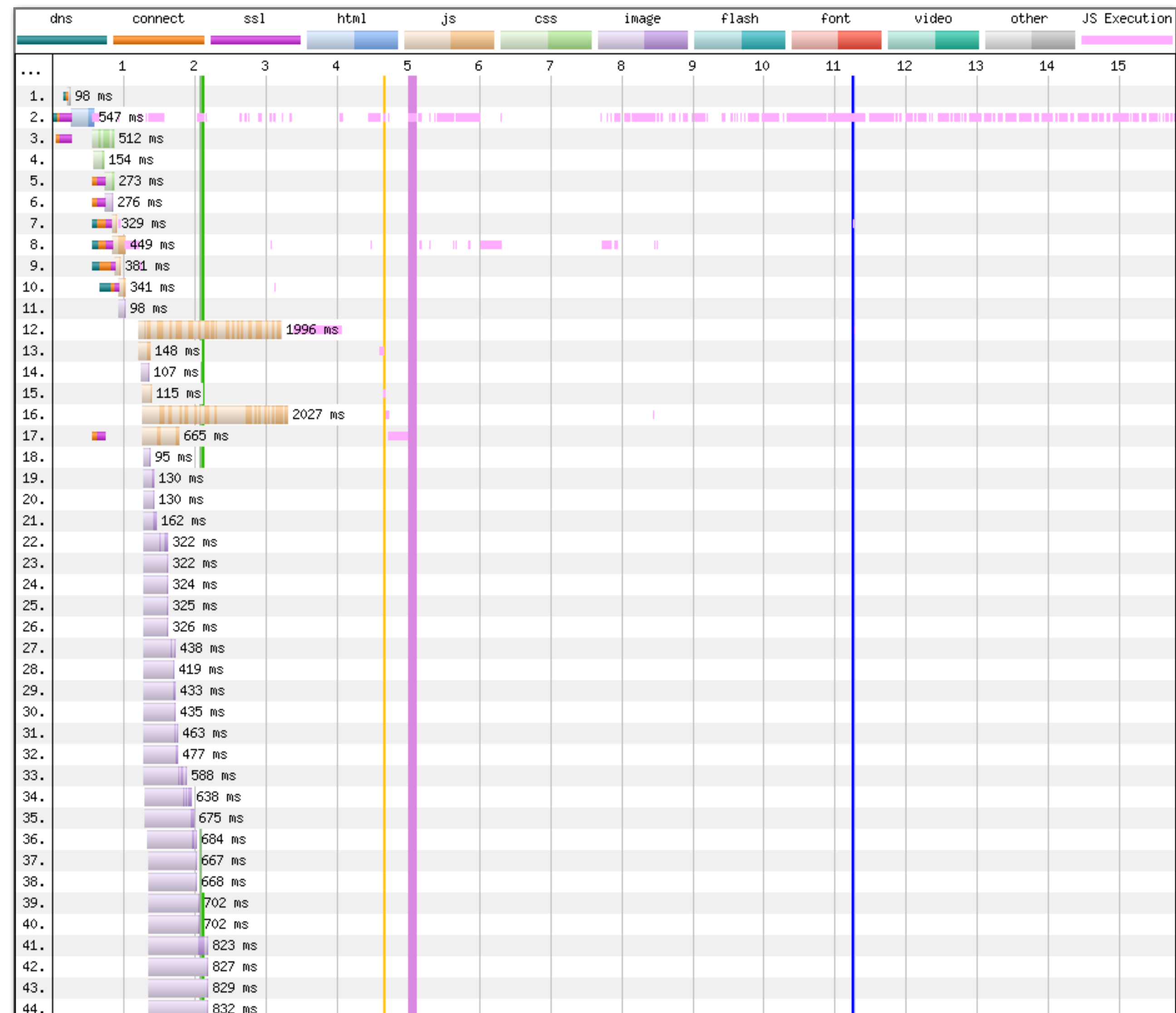
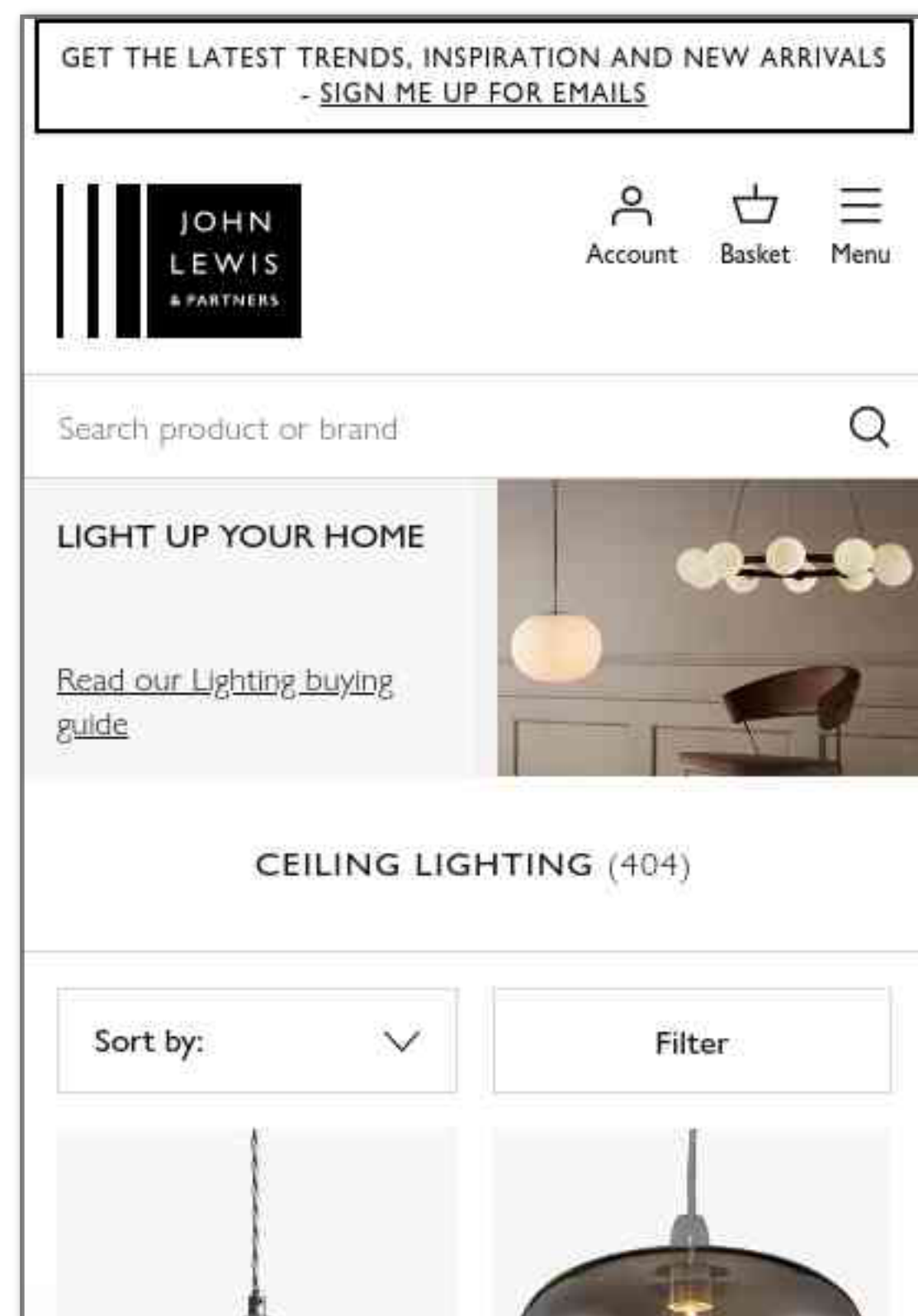


# Anyone want to buy a bag or a tent or a light?



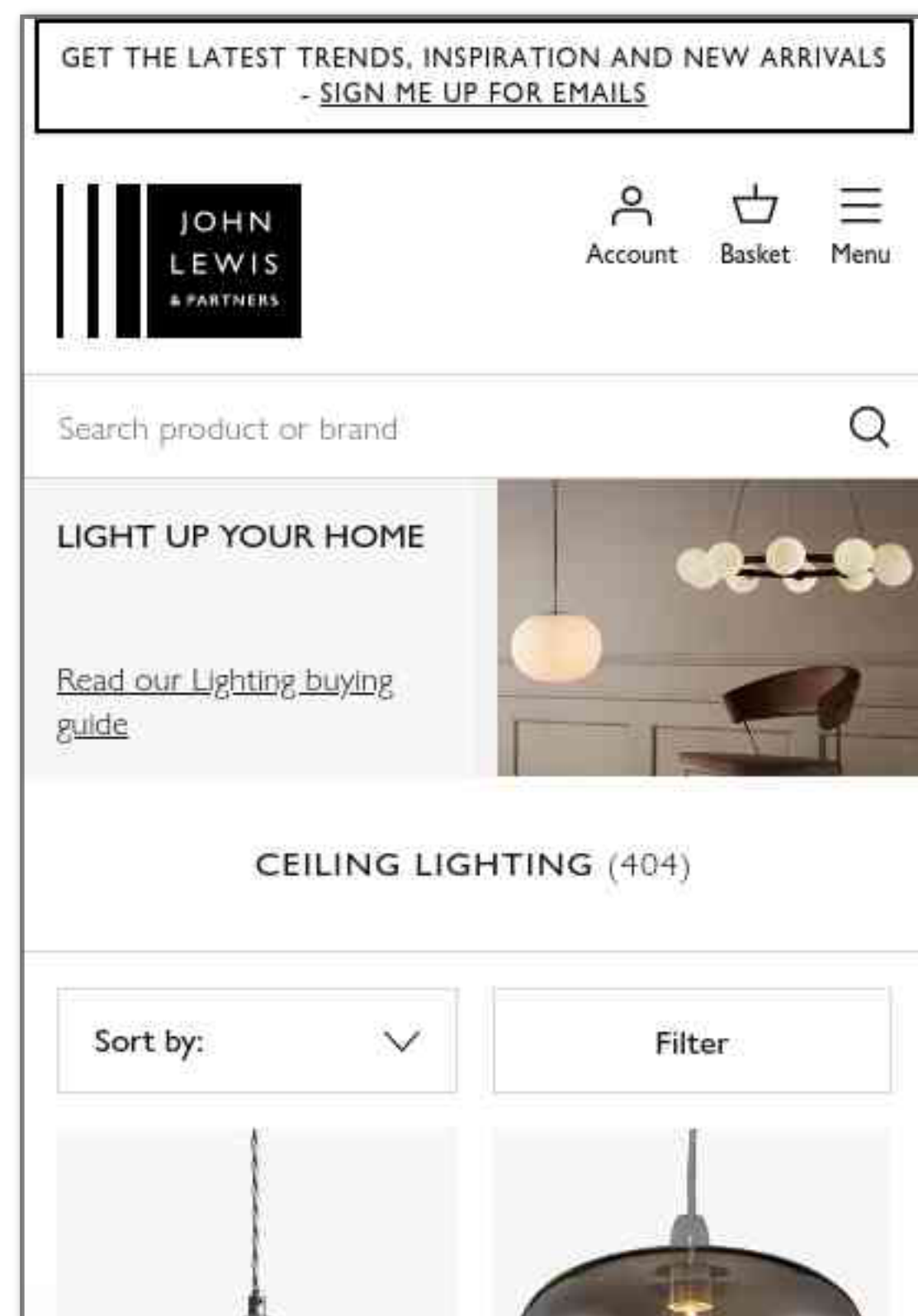


# These challenges feed into site performance too





# These challenges feed into site performance too



18,723 pixels tall

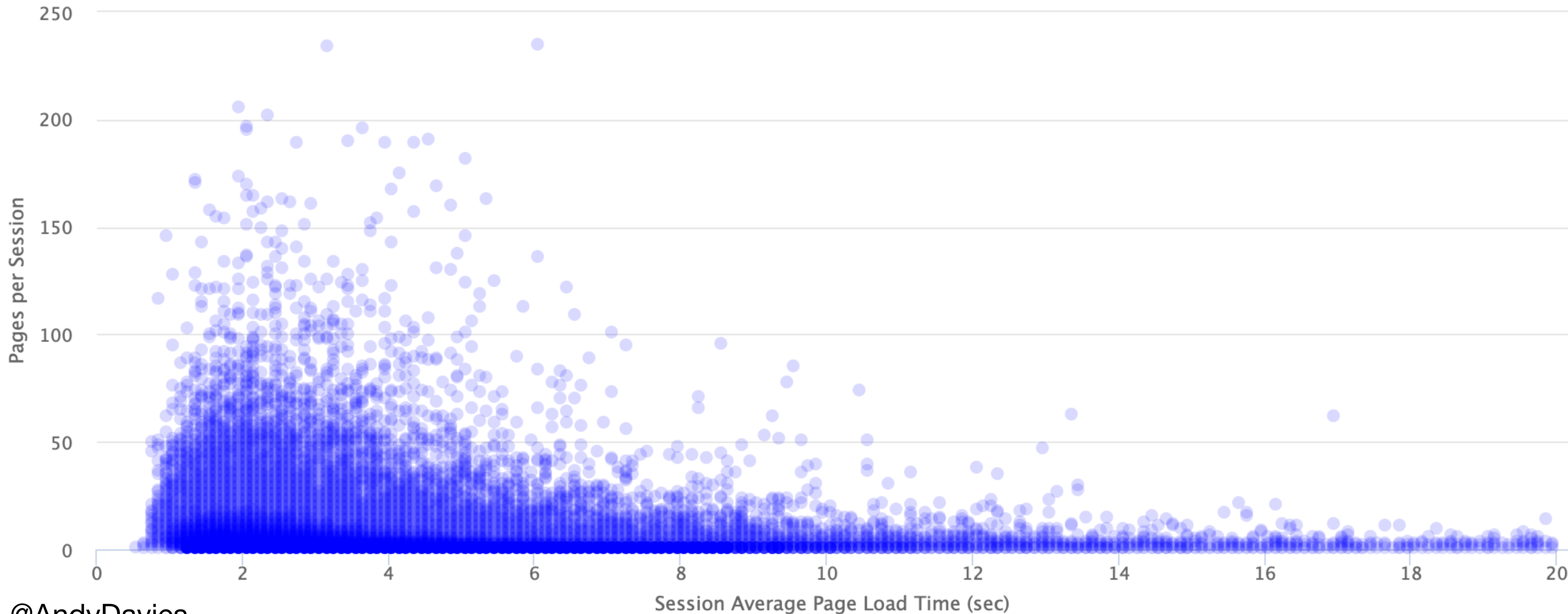




**With worrying consequences for  
the success of our sites**



# Visitor's who have better experiences are more engaged





# Your Analytics are Skewed

They're biased towards visitors who'll  
tolerate the experience you're delivering

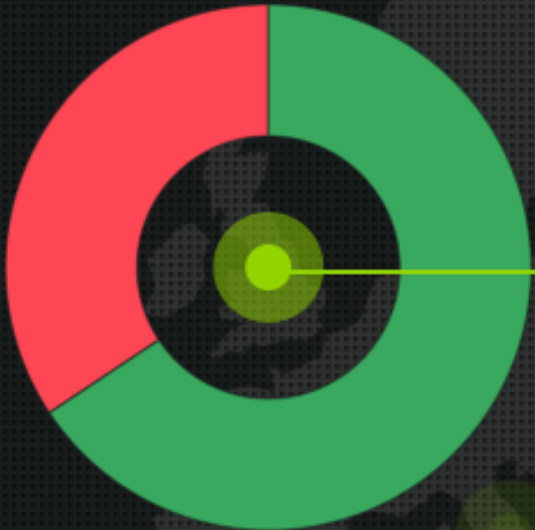







# Your most popular browsers might look something like this

Safari mobile 12	51%
Chrome Mobile 76	8%
Chrome 76	8%
Mobile Samsung Browser 9	4%
Chrome Mobile 77	4%
Safari 12	3%
Unknown Facebook App	2%
Safari mobile 11	2%
Mobile Samsung Browser 10	2%
Facebook App 238	2%
others	15%



# In the UK, Android outsells iOS



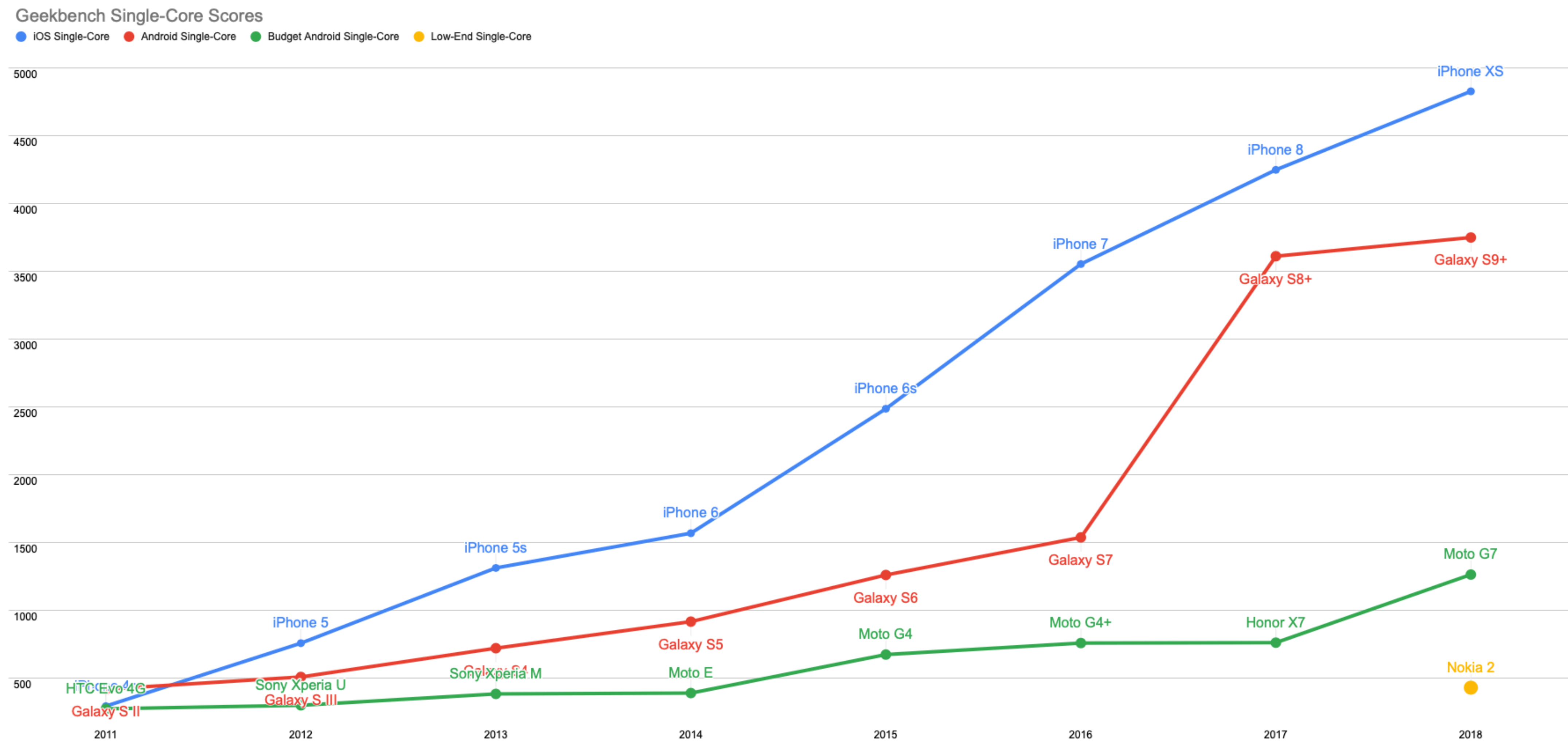
GREAT BRITAIN 3 M/E JUN 2019			×
	Android	65.4%	
	BlackBerry	0.1%	
	iOS	34.1%	
	Windows	0.4%	
	Other	0.0%	
Compare			↔

3 M/E JUN 2019















# But Android devices are generally much less powerful

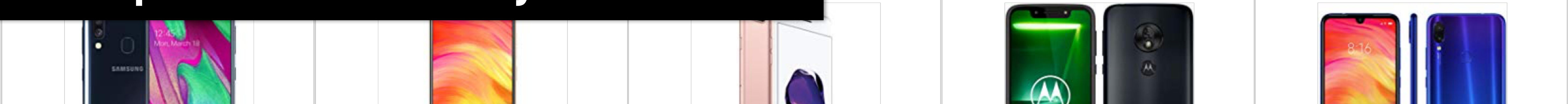




Best Sellers in SIM-Free & Unlocked Mobile Phones

<div>#1</div> <div></div> <div>Nokia 105 Single SIM Mobile Phone (2017 Edition) - Black</div> <div>★★★★☆ 1,053</div> <div>£14.90 ✓prime</div>	<div>#2</div> <div></div> <div>motorola moto g7 Power 6.2-Inch Android 9.0 Pie UK Sim-Free Smartphone with 4GB RAM and...</div> <div>★★★★☆ 478</div> <div>£156.00 ✓prime</div>	<div>#3</div> <div></div> <div>Nokia 105 1.8-Inch SIM Free Feature Phone - White</div> <div>★★★★☆ 1,053</div> <div>£14.99 ✓prime</div>	<div>#4</div> <div></div> <div>Xiaomi Redmi Note 7 4GB RAM 64GB ROM Snapdragon 660 Octa Core 4000mAh Black UK</div> <div>★★★★☆ 58</div> <div>£169.99 ✓prime</div>	<div>#5</div> <div></div> <div>Nokia 105 1.8-Inch Single Sim Feature Phone - Blue (2017 Edition)</div> <div>★★★★☆ 1,053</div> <div>£15.11 ✓prime</div>
<div>#6</div> <div></div> <div>Mobile Phone, Ulefone Note 7 (2019) Triple Rear Camera SIM Free Smartphones Unlocked, Triple...</div> <div>★★★★☆ 91</div> <div>£59.98 ✓prime</div>	<div>#7</div> <div></div> <div>Samsung Galaxy A50 128GB 6.4-Inch FHD+ Android Dual-SIM Smartphone - Black (UK Version)</div> <div>★★★★☆ 48</div> <div></div>	<div>#8</div> <div></div> <div>motorola moto g7 6.24-Inch Android 9.0 Pie UK Sim-Free Smartphone with 4GB RAM and 64GB...</div> <div>★★★★☆ 478</div> <div>£219.99 ✓prime</div>	<div>#9</div> <div></div> <div>Huawei Y6 2019 32 GB 6.09 inch FullView Dewdrop Display Smartphone with 13 MP...</div> <div>★★★★☆ 42</div> <div>£109.00 ✓prime</div>	<div>#10</div> <div></div> <div>Nokia 106 Dual Sim 2018 Dark Grey With LED Torch - FM Radio - Big Button Phone</div> <div>★★★★☆ 38</div> <div>£17.99 ✓prime</div>

What phones should you test on?















**26% of UK mobile customers  
are on PAYG plans**



Best Sellers in Prepaid Mobile Phones

<div>#1</div> <div></div> <div>Vodafone Smart First 7 Pay As You Go Smartphone (Locked to... ★★★★☆ 684 £28.90 ✓prime</div>	<div>#2</div> <div></div> <div>Flip Mobile Phone Pay as You Go Simple GSM Dual SIM Basic... ★★★★☆ 103 £18.99 ✓prime</div>	<div>#3</div> <div></div> <div>Ttfone Star Big Button Simple Easy To Use Clamshell Flip Mobile... ★★★★☆ 219 £29.99 ✓prime</div>	<div>#4</div> <div></div> <div>Vodafone Smart 4 Mini Pay as you go Handset - Black ★★★★☆ 384 £35.00 ✓prime</div>	<div>#5</div> <div></div> <div>Ttsims TT120 Dual Sim O2 Pay As You Go Mobile Phone (Red) ★★★★☆ 38 £11.99 ✓prime</div>
<div>#6</div> <div></div> <div>Ttfone Star Big Button Simple Easy To Use Clamshell Flip Mobile... ★★★★☆ 242 £29.99 ✓prime</div>	<div>#7</div> <div></div> <div>Ttfone Jupiter 2 Big Button Pay As You Go Easy Simple Mobile Phone... ★★★★☆ 213 £24.99 ✓prime</div>	<div>#8</div> <div></div> <div>Ttfone Star Big Button Simple Easy To Use Clamshell Flip Mobile... ★★★★☆ 219 £29.99 ✓prime</div>	<div>#9</div> <div></div> <div>Vodafone BlackBerry Curve 9320 Pay As You Go Smartphone - Blue ★★★★☆ 11 2 offers from £14.90</div>	<div>#10</div> <div></div> <div>Ttfone Star Big Button Simple Easy To Use Clamshell Flip Mobile... ★★★★☆ 242 £29.99 ✓prime</div>

And the best selling PAYG smart phones are \\_(ツ)\_/







# Released May 2016 Android 5.1!!!

Vodafone Smart First 7 Pay As You Go  
Smartphone (Locked to...

★★★★☆ 684

£28.90 ✓prime

[https://www.gsmarena.com/vodafone\\_smart\\_first\\_7-8100.php](https://www.gsmarena.com/vodafone_smart_first_7-8100.php)





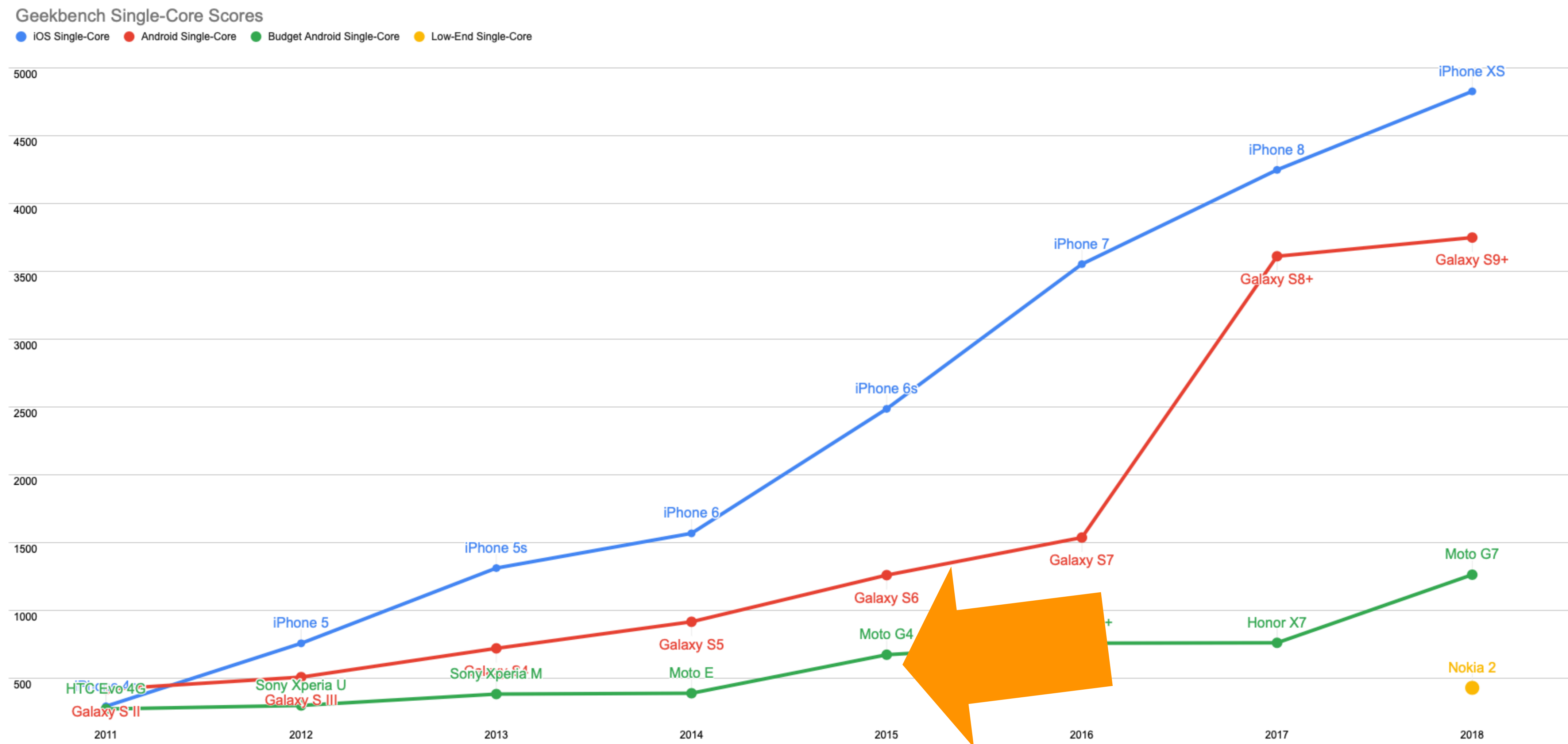
# Alcatel 1x

3rd most popular PAYG  
phone on Vodafone

£35 from Tesco Mobile



# Somewhere around Moto G4 level of performance

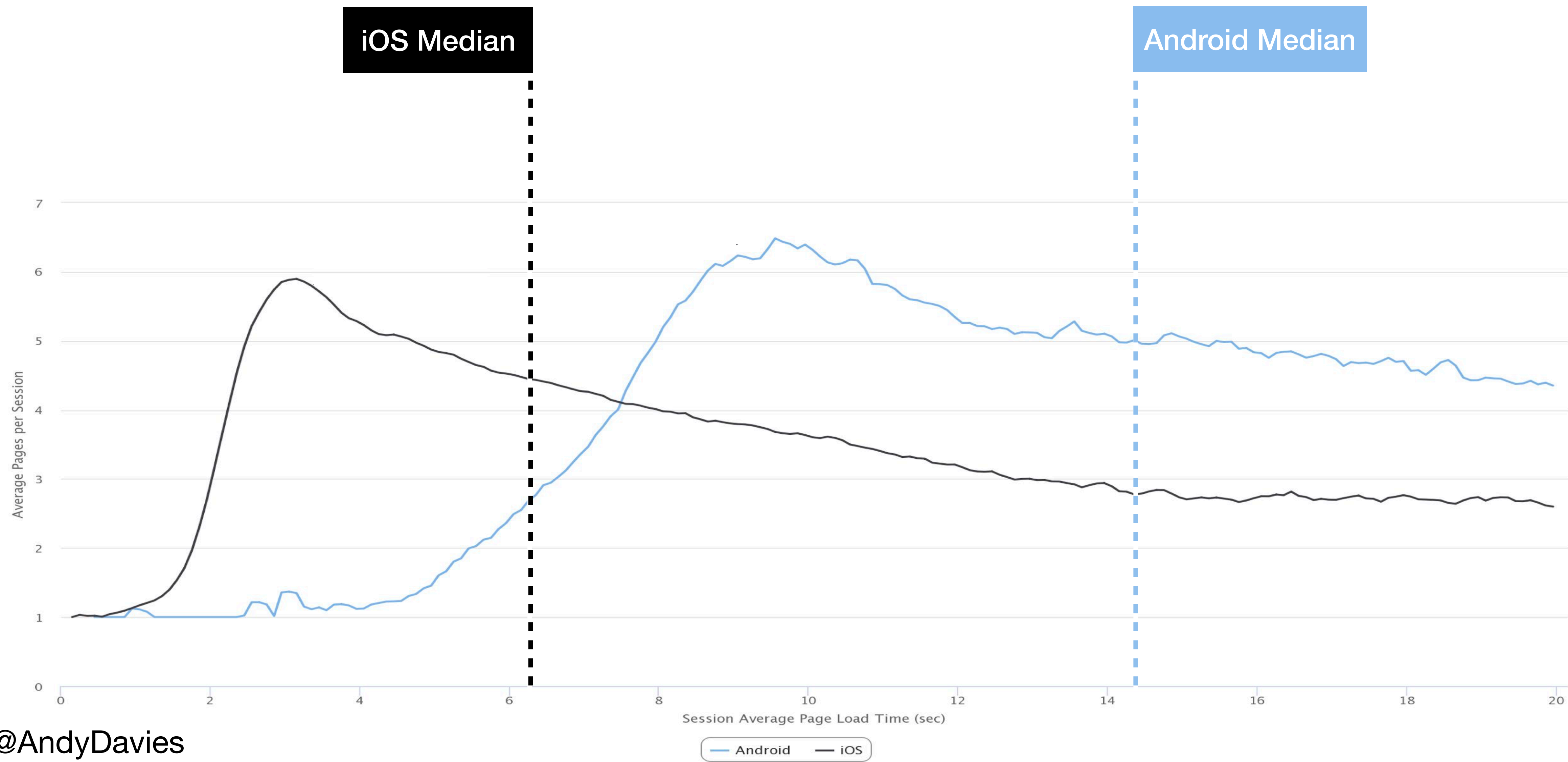




And guess what happens if we  
improve those slow experiences?

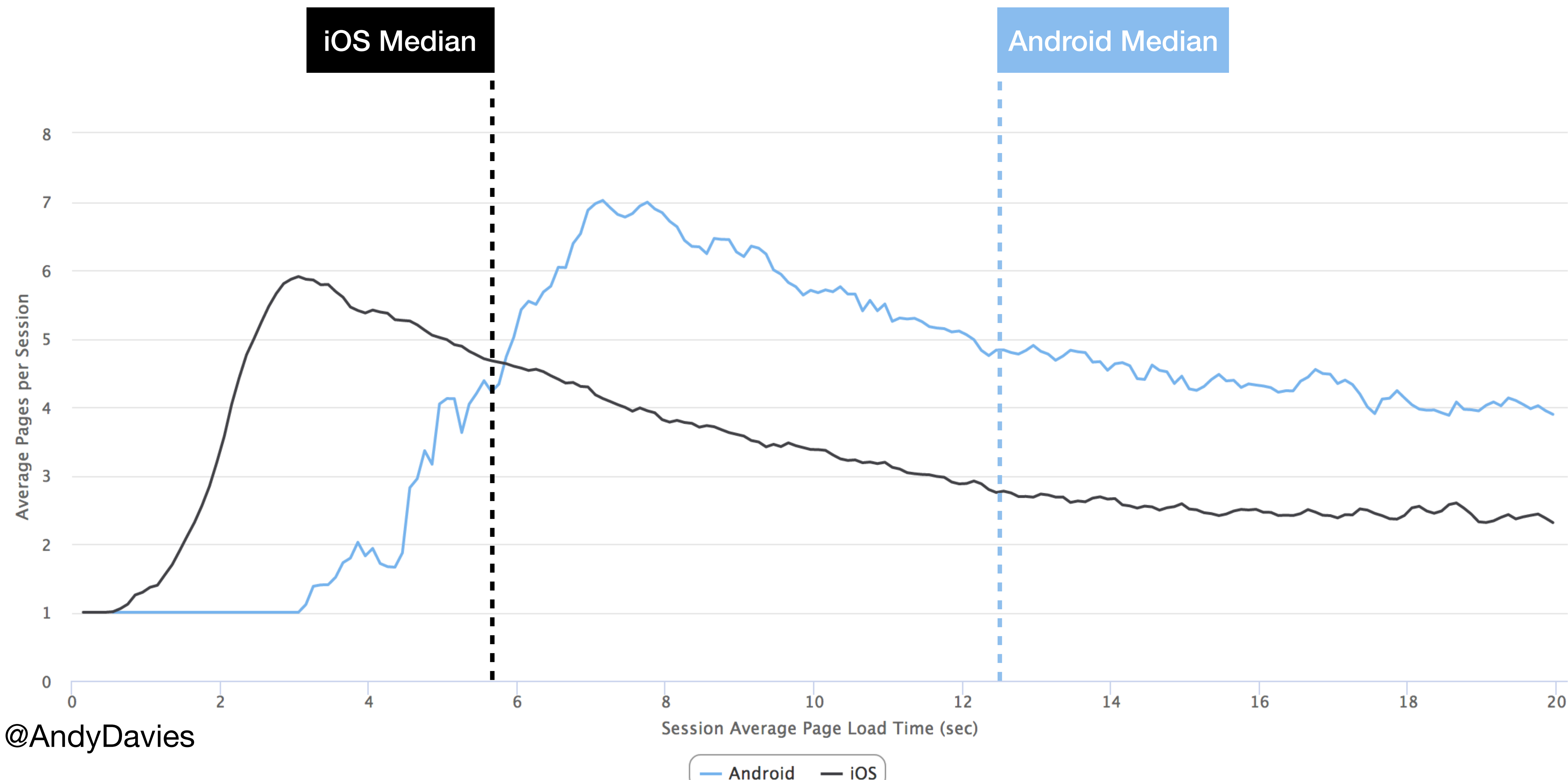


April 2017



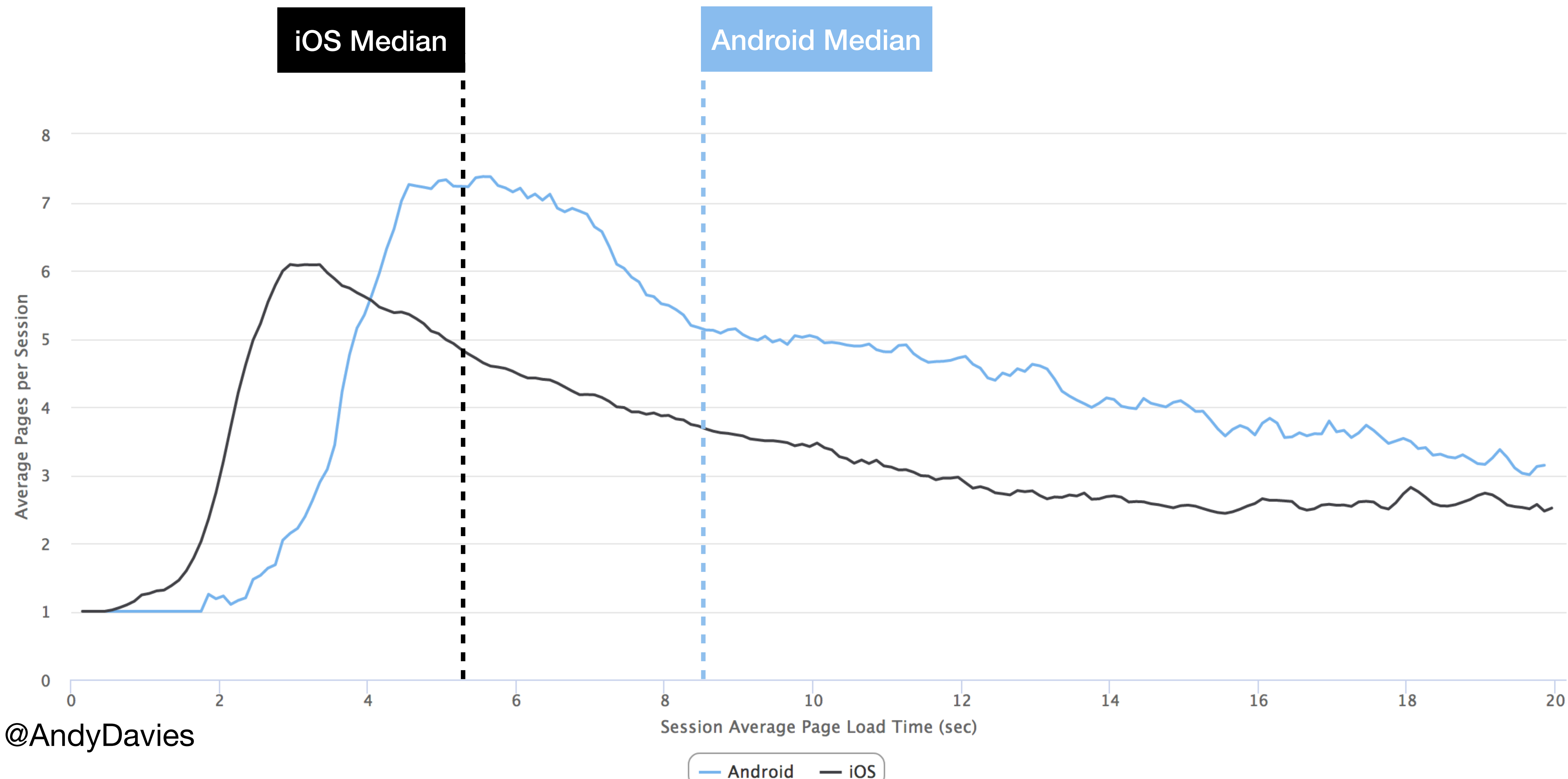


# June 2017



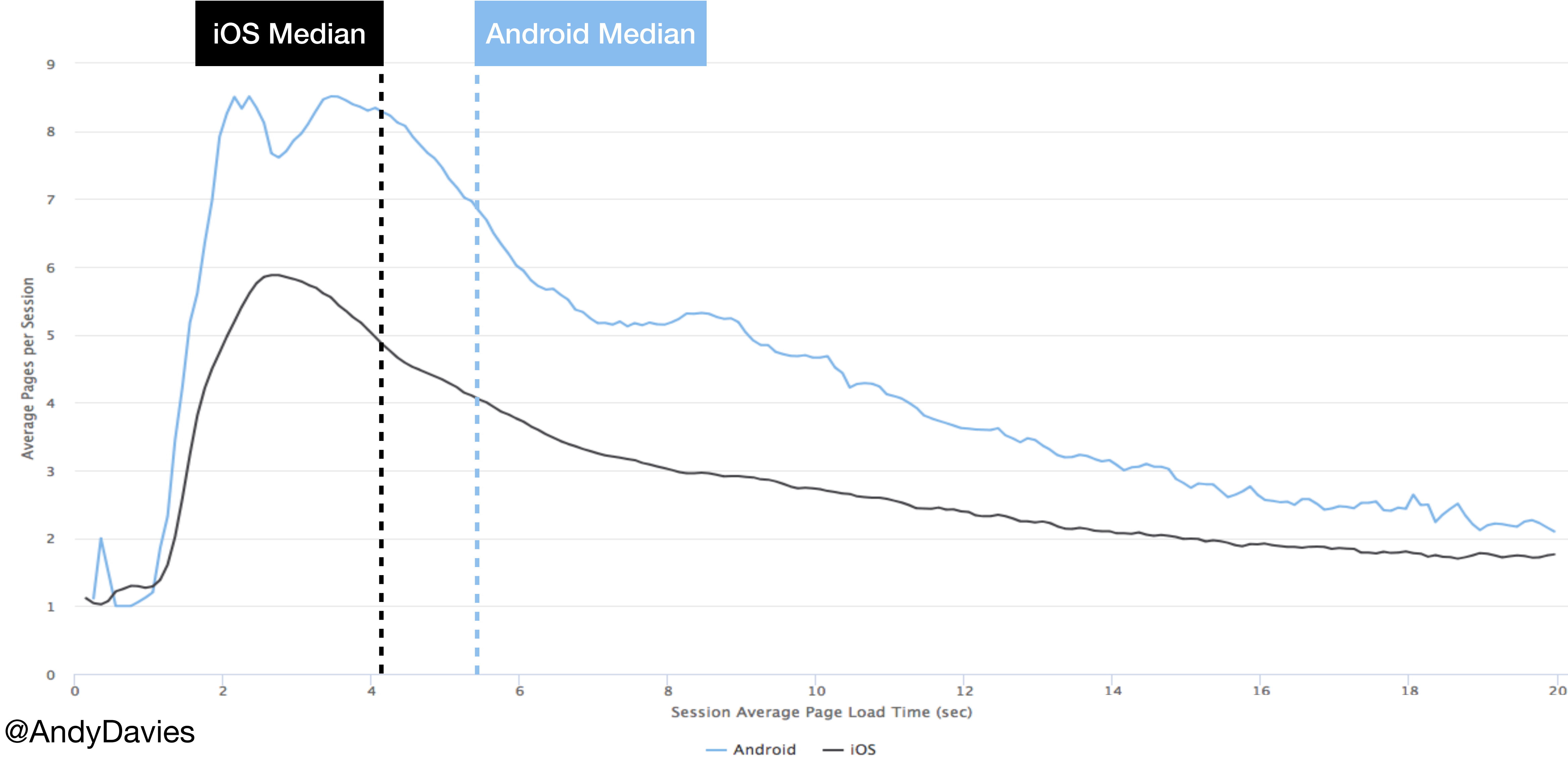


# August 2017





# April 2018





Our site's success depends on  
how our visitors behave



**Our visitors' experience influences  
their behaviour**



How we design, develop and deliver  
our pages determines our visitor's  
experience



**@AndyDavies**

**hello@andydavies.me**

