



Wi-Fi Intelligence

Making Connections: Wi-Fi on the UK High Street

NOVEMBER 2015



High Street Wi-Fi: The Best Connected Brands

Free Wi-Fi has become an essential component of the customer experience offered by UK retailers, restaurants, and other high street brands. While it may once have been associated primarily with coffee shops and cafés looking to attract nomadic workers and their laptops, the reality today is that consumers expect it wherever they go — an expectation that all manner of venues and businesses have positioned themselves to meet, wherever they have a presence.

Banks, department stores, supermarkets, fast food restaurants, and pharmacies; they're all keeping the UK consumer connected because doing so is a simple but highly effective way to improve their customer's experience.

But just how good is this connectivity? How easy is it to access? And what new light can it shed on the retail habits of the UK consumer? Using anonymised data gathered from more than 100,000 UK smartphones, a subset of Devicescape-enabled handsets active in the UK during July 2015, we set about finding some answers.

In this report, the first in our new Wi-Fi Intelligence series, Devicescape identifies the brands leading the charge in terms of Wi-Fi quality, accessibility and usage. And we look at what consumers' connectivity habits reveal about the popularity of different high street brands across a range of sectors.



KEY FINDINGS

1 **Greggs** bakery offered the best quality Wi-Fi connections on the UK high street for the period of the survey



2 **Boots** offered the best overall quality of experience when ease of access was also taken into account

3 **Marks & Spencer** emerged as the most inter-connected brand, with the highest number of consumers who use its Wi-Fi also connecting at other locations

4 Other brands scoring well included **Asda, Barclays,** and **Pizza Express**

5 In general, the free Wi-Fi assessed by **Devicescape** was of very high quality at numerous brand locations



"Banks, department stores, supermarkets, fast food restaurants, and pharmacies; they're all keeping the UK consumer connected because doing so is a simple but highly effective way to improve their customer's experience."

Pie-Fi and Wi-Fronts

Greggs and Marks & Spencer were found to offer the best Wi-Fi Quality of Service of the brands surveyed.

The UK high street is packed with free Wi-Fi. But how good is this connectivity, and which brands deliver the best connections? Devicescape measured Wi-Fi Quality of Service (QoS) at multiple locations operated by a large number of UK high street chains and the results explode the myth that free Wi-Fi is just a coffee shop phenomenon.

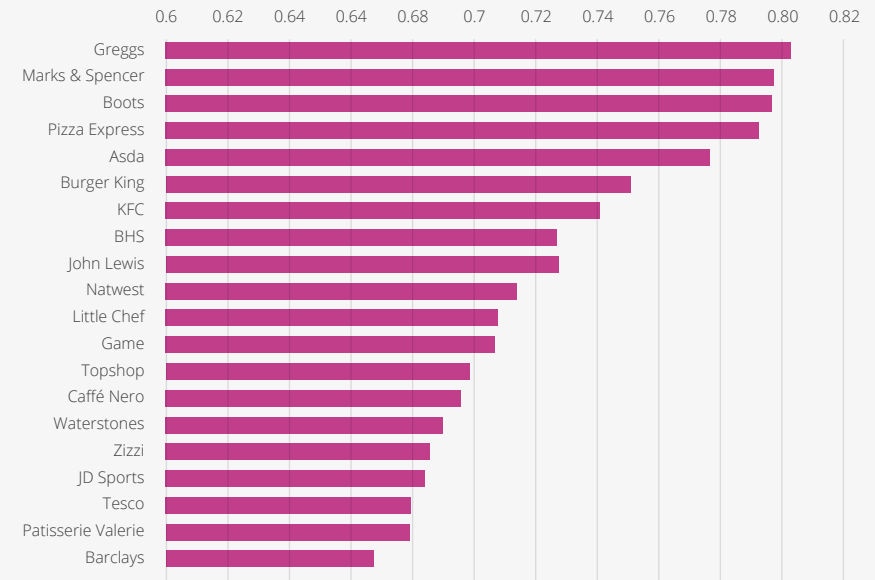
'Food on the go' bakery brand Greggs offered the best quality free Wi-Fi of the brands surveyed, with department store Marks & Spencer, Boots pharmacy, restaurant chain Pizza Express and supermarket brand Asda completing the top five.

Only one of the UK's big high street coffee shop chains was among the top 20 brands for Wi-Fi QoS, highlighting just how important quality, free Wi-Fi has become to the high street customer experience across the board.

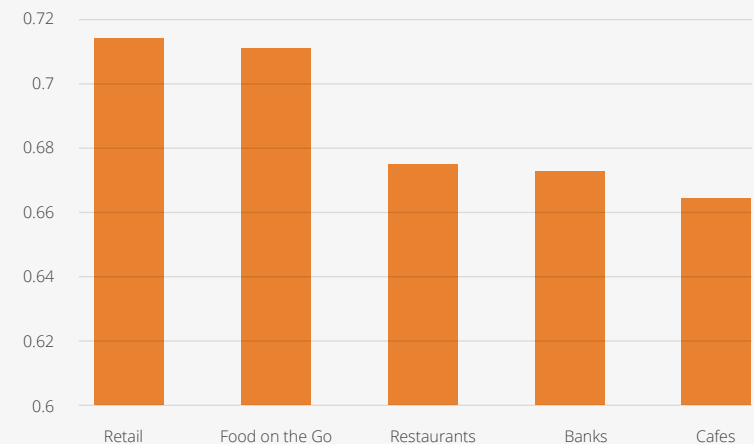
Coffee Shops were the original innovators but neighbouring brands have clearly watched and learned. The top 20 brands for Wi-Fi QoS include banks, supermarkets and department stores, as well as a number of restaurants and specialist retailers.

Judged by sector, Retail and Food on the Go establishments offered the best quality Wi-Fi in Devicescape's survey.

Top UK High Street Brands by Wi-Fi Quality of Service



Wi-Fi Quality of Service by High Street Sector



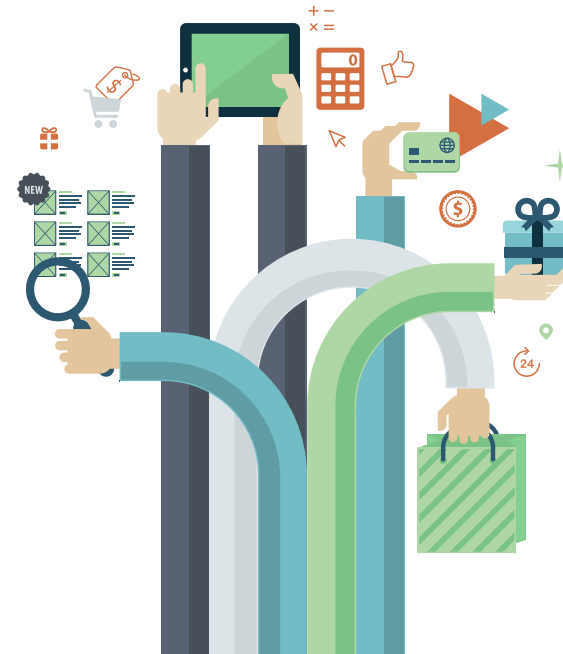
Continued

Free Wi-Fi? It's all good

"The results of our QoS survey might seem surprising. But the real takeaway here is not that Greggs has better Wi-Fi than Burger King," says Devicescape's Director of Marketing, Mike Hibberd.

"What stands out from the QoS element of our survey is that the quality of this Wi-Fi is really very good across the board. Anything above 0.6 on our QoS scale is at the very least good enough for streaming video to a smartphone.

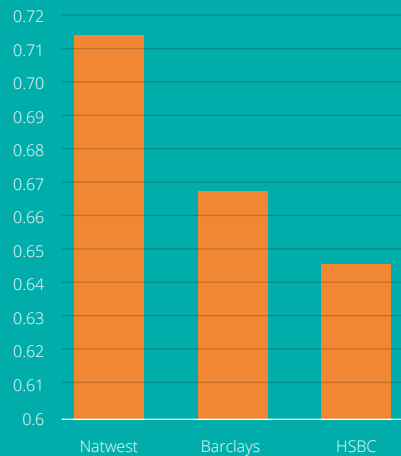
"That said, you can't compile a ranking without crowning winners, so congratulations to Natwest, Greggs, Caffé Nero, Pizza Express, and Marks & Spencer for topping the QoS list in their respective categories."



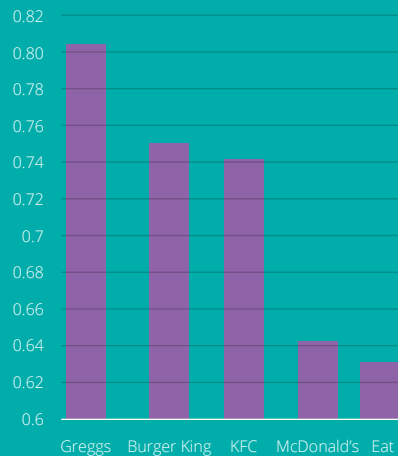
QOS METHODOLOGY

Devicescape's QoS measurement uses a proprietary algorithm which takes into account a number of factors, including stability of connection, RF quality, and throughput. Wi-Fi networks are assigned a QoS score on a scale of zero to one, with one being the best achievable rating. A score of 0.6, used as the cut-off point for the purposes of these charts, represents a good quality Wi-Fi connection.

Leading Bank Brands by Wi-Fi QoS



Leading Food on the Go Brands by Wi-Fi QoS



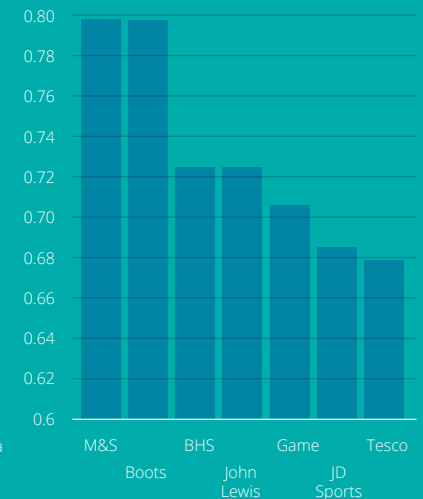
Leading Cafe/Coffee Shop Brands by Wi-Fi QoS



Leading Restaurant Brands by Wi-Fi QoS



Leading Retail Brands by Wi-Fi QoS





"What stands out from the QoS element of our survey is that the quality of this Wi-Fi is really very good across the board – at the very least good enough for streaming video to a smartphone."

Access all Areas?

Boots and Asda offer the best overall Wi-Fi experience, when ease of access is taken into account

With free Wi-Fi, quality of experience is not limited to quality of connection. To have real utility, Wi-Fi must be easy for consumers to access. The fewer steps the consumer must take to get connected the better; the more complicated or arduous the access process, the less likely the consumer is to make a connection.

Policies on Wi-Fi access vary considerably from brand to brand. While high street chains are understandably keen to use their Wi-Fi assets to increase customer knowledge, lengthy or demanding access processes risk deterring customers.

Devicescape collected information on Wi-Fi access procedures at each of the brands which placed in the top 20 for Wi-Fi QoS, identifying what would be required by a consumer trying to access each brand's free Wi-Fi for the first time.

For all brands the consumer is required to locate the correct SSID, which can be confusing in itself, but past this point the best access experience required simply that a consumer navigate a one-click portal, on each visit.

This is the method favoured by banks Barclays and Natwest, retailers Game, John Lewis, Tesco and Topshop/Topman, and coffee shop/cafe chains Starbucks and Patisserie Valerie.

Supermarket chain Asda, Boots pharmacy, and book retailer Waterstones all require that customers submit some personal data, a mix of name, email address, mobile number, and even gender. Asda requires that the user be sent an SMS code after registering their mobile number.

The remaining nine brands from the top 20 QoS list demand a far greater level of information. As well as email address and mobile number, these brands require that the user input name, gender, postcode and address — and then create a username and password that can be used to log-on during subsequent visits.

Top 20 Brands for Wi-Fi QoS Grouped by Ease of Wi-Fi Access



Continued

Access all Areas?

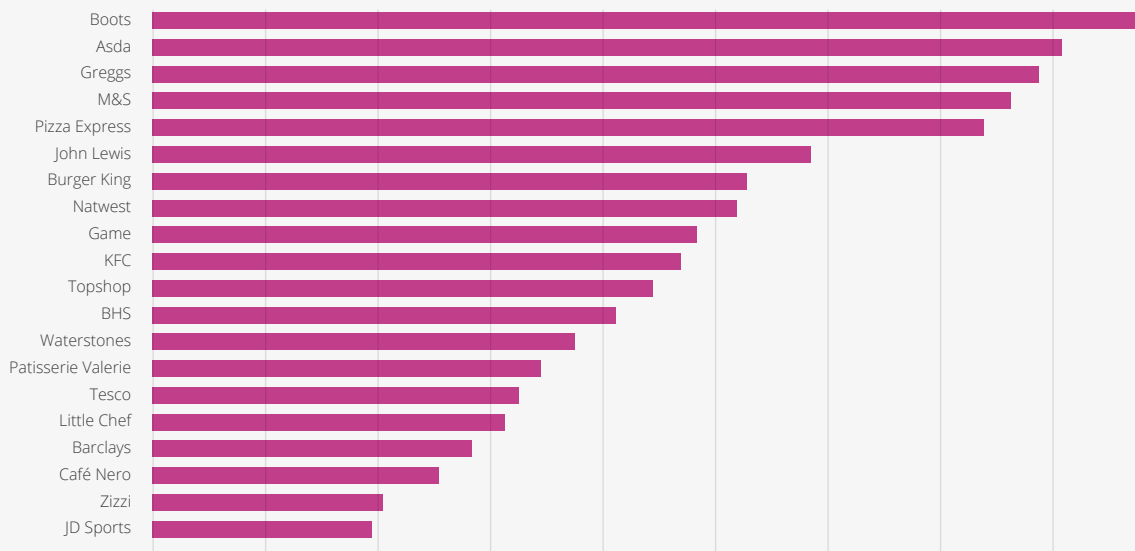
When ease of access is combined with QoS to give an overall measure of Quality of Experience, the top 20 ranking changes, with Boots and Asda emerging as the high street Wi-Fi champions. There is little between the leaders, however, and Greggs, Marks & Spencer, and Pizza Express all retain their top five status.

"Of course brands want to take every opportunity to gather customer data," says Devicescape's Director of Marketing, Mike Hibberd. "But it seems counter-intuitive to provide a great service like free Wi-Fi and then make it difficult to access. The best time to interact with a customer over Wi-Fi is when they are already happily connected, rather than while they are trying to establish a connection, which can be very frustrating."

QUALITY OF EXPERIENCE METHODOLOGY

Overall Quality of Experience (QoE) depends on simplicity of access as well as quality of Wi-Fi connection. In order to rank the top brands by QoE, Devicescape assigned a value to each step required by a user to manually gain access to a brand's Wi-Fi for the first time. The combined value of the total number of required steps for each brand was then deducted from the brand's QoS score.

Top 20 Brands Surveyed by Overall Wi-Fi Quality of Experience





"The fewer steps the consumer must take to get connected the better; the more complicated or arduous the access process, the less likely the consumer is to make a connection."

Who goes there? The UK's most interconnected brands

Marks & Spencer and Greggs occupy the top spots once again

While Devicescape anonymizes data such that individual end users are not identified, it is possible to tell from aggregated data how often the same devices connect to the Wi-Fi offered in different locations.

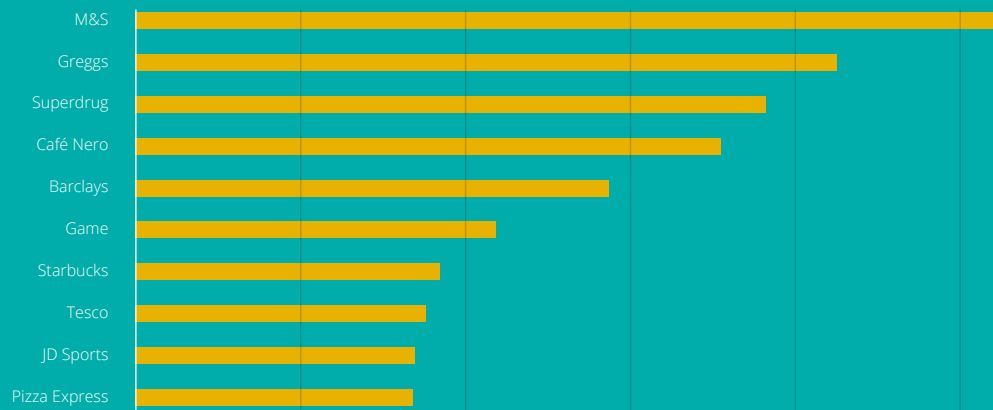
As might be expected, the brands which enable the greatest number of unique connections tend to be those with the largest physical footprint.

More interesting, however, is what Devicescape discovered about the frequency with which unique devices connected at different locations.

Marks & Spencer, one of the most established and recognisable brands on the UK high street, is also the most interconnected. More unique devices which connected at Marks & Spencer locations were found to have connected at other locations than was the case for any other brand, making M&S the connectivity hub of the UK retail sector.

Greggs, a front runner throughout the survey, took second place, followed by Superdrug, Caffé Nero, Barclays and Game.

Most Interconnected Brands on the UK High Street



Note: Chart shows brands ranked by number of unique devices which connected to Wi-Fi at one of their locations and also at a location belonging to one of the other brands surveyed. Connection volumes are confidential.

Continued

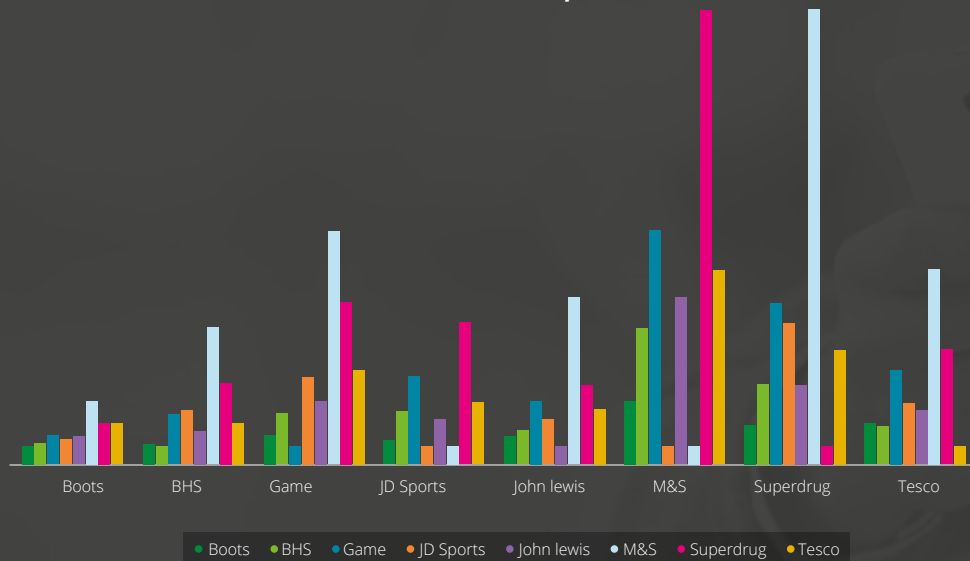
Who goes there? The UK's most interconnected brands

Among other brands surveyed from the retail sector, Marks & Spencer had the highest crossover with Superdrug. Interestingly, it also had a comparatively high crossover with electronics retailer Game.

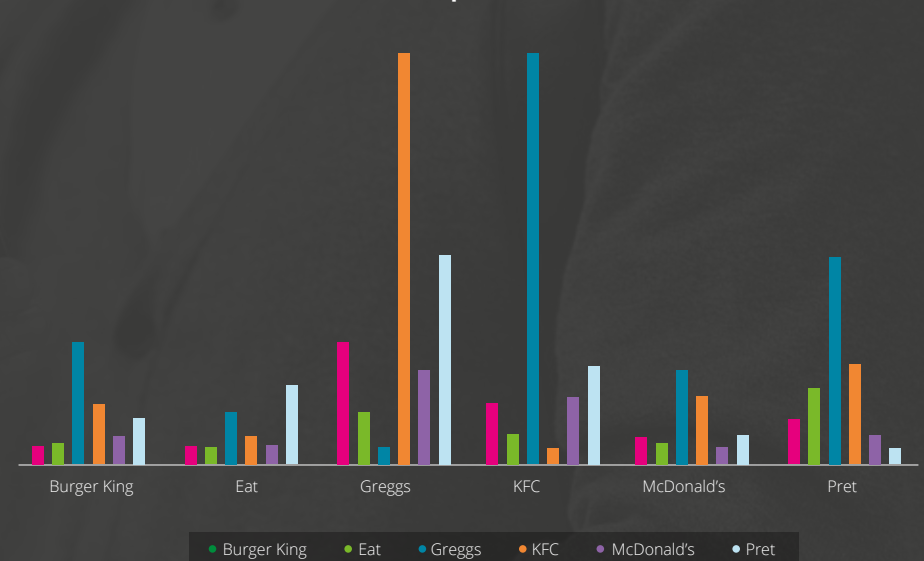
In the Food on the Go sector, a large number of consumers are clearly keen on both Greggs and KFC. But there was also a comparatively high crossover between Greggs and Pret. While these two brands might not necessarily view themselves as competitors, a good portion of their customers clearly see the appeal of their contrasting propositions.



Connection Overlap: Retail



Connection Overlap: Food on the Go





"More unique devices which connected at Marks & Spencer locations were found to have connected at other locations than was the case for any other brand, making M&S the connectivity hub of the UK retail sector."



Keeping consumers connected: Why high street Wi-Fi matters

The many brands which offer free Wi-Fi to their customers obviously do so to improve their own in-store experience. But, viewed collectively, this Wi-Fi represents a hugely important public connectivity resource.

Data published by UK communications regulator Ofcom in December 2014¹ identified 37 per cent of UK premises as indoor 4G 'not-spots' (which is to say indoor LTE service was completely unavailable) and a further 34 per cent of premises as partial indoor LTE not-spots.

Mobile operators cannot be held accountable for the laws of physics — which make it difficult for radio signals to penetrate through walls of concrete, brick and steel — but neither can they address the problem of indoor coverage solely by using cellular network infrastructure, or by deploying their own Wi-Fi. The financial and practical barriers are simply too high.

2015 has seen a raft of Wi-Fi Calling launches from the UK's mobile operators, showing they understand the importance of Wi-Fi as a connectivity resource, and they have publicly speculated about the role businesses and venue owners can play in delivering connectivity where they themselves cannot.²

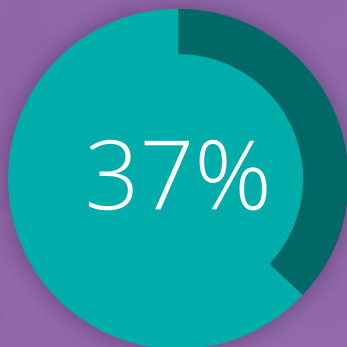
In a report published in October³, market analysis firm Strategy Analytics described Wi-Fi Calling as a "must have service" for mobile operators. "The number one driver for Wi-Fi Calling," the firm said in a release, "is to enable customers to make and receive mobile calls in areas with poor cellular signal but good Wi-Fi coverage."

Sue Rudd, Director of Wireless Networks & Platforms for Strategy Analytics, added: "Operators should take advantage of Wi-Fi and embrace it as a cost-effective, integral part of their network evolution."

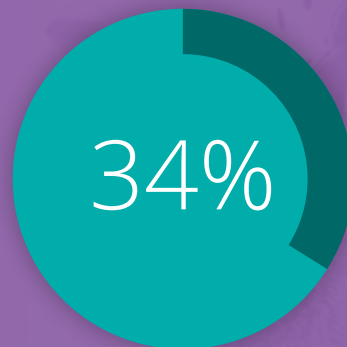
Devicescape believes the brands delivering Wi-Fi as a complimentary service to their customers are contributing a vital source of connectivity to UK consumers.

Summary of UK Indoor 4G Mobile Network Coverage, June 2014 Source: Ofcom analysis of MNO data

Complete "not-spots"



Partial "not-spots"



Covered by Vodafone, O2, and EE



1. "Infrastructure Report 2014," Ofcom, 8/12/2014 <http://stakeholders.ofcom.org.uk/binaries/research/infrastructure/2014/infrastructure-14.pdf>

2. "Three calls on other sectors to help boost coverage," Mobile, 18/6/2015 <http://www.mobiletoday.co.uk/news/industry/35276/three-calls-on-other-sectors-to-help-boost-coverage.aspx#.VhO1TPIVhBc>

3. "Wi-Fi Calling a Must Have Service from Mobile Operators, says Strategy Analytics," Strategy Analytics, 1/10/2015 https://www.strategyanalytics.com/strategy-analytics/news/strategy-analytics-press-releases/strategy-analytics-press-release/2015/10/01/wi-fi-calling-a-must-have-service-from-mobile-operators-says-strategy-analytics#.VhO3Q_IvHbc

Conclusion

Free Wi-Fi is rapidly becoming as important to the customer experience offered by high street brands as other key amenities such as air conditioning and public bathrooms. Pioneered by coffee shops and cafes, Wi-Fi is now made available by brands from almost all high street verticals, delivering a valuable service to a public hungry for connectivity.

Sheer abundance is a good enough measure of Wi-Fi's significance to these businesses. But the high quality of the connectivity many brands offer, which is routinely good enough to support reliable video streaming to mobile devices, really underlines their understanding of its value.

While the 'Food on the go' and retail sectors offered the best quality of connection found by Devicescape during this survey — with Greggs and Marks & Spencer emerging as the champions of UK high street Wi-Fi — the reality is that quality was high in numerous locations.

Nonetheless there is room for improvement. There are big brands out there which have yet to make free Wi-Fi a key part of their customer experience, and there are still many instances in which the unassisted consumer faces a complex and confusing access process before they can enjoy the connectivity their favourite brands provide.



NOTES TO EDITORS

- The brands included in the survey were drawn from the 40 brands whose Wi-Fi was most frequently connected to by the Devicescape sample base over the course of July 2015.
- In each data point we have included only the top set from this surveyed collection.
- The absence of a brand from any particular data point does not, therefore, constitute a negative judgement on that brand.
- For the purposes of this report we have omitted municipal networks and Wi-Fi provided by the transport sector. The term 'High Street', for the purposes of this report, covers a range of popular retail and leisure destinations, including large malls and transit locations such as stations and motorway services.
- The data gathered for this survey was fully anonymised. Devicescape does not capture or store any personal or identity information.

License Terms and Conditions

This report is the intellectual property of Devicescape Software, Inc., and is subject to copyright restrictions.

It is provided to authorized companies and individuals ("Licensees") only. Licensees are allowed to use the Report for internal research, and are also allowed to reproduce the data in whole or in part in the Licensees' own publications, which can include but are not limited to reports, blogs, articles, data sheets and white papers ("Derivative Works"), with the following restrictions:

Data in the Report may not be sold either in whole or in part.

When data from the Report is used in Derivative Works, the data must be attributed to the "Devicescape Wi-Fi Intelligence report, 'Making Connections — Wi-Fi on the UK High Street'."

The licensee agrees to indemnify and hold harmless Devicescape with regard to the accuracy and suitability of the Report for any purposes whatsoever.



ABOUT DEVICESCAPE

Devicescape delivers intelligent Connectivity, Engagement, and Insight services to telecom operators, mobile application providers, device manufacturers, and retailers.

Click here to view our **Privacy Policy**

For more information visit **www.devicescape.com**
and follow us on Twitter: **twitter.com/devicescape**

MEDIA ENQUIRIES:

Henry Burrell
Babel PR
for Devicescape
+44 (0)20 7199 3975
devicescape@babelpr.com

ALL OTHER ENQUIRIES:

Mike Hibberd
Director of Marketing
Devicescape
+44 (0)7812 144 193
mike.hibberd@devicescape.com