



Wi-Fi Intelligence

Making Connections: Wi-Fi in the U.S. Retail Sector

MARCH 2016



Shared Wi-Fi in the U.S.- The Best Connected Brands

Free Wi-Fi has become an essential component of the customer experience offered by U.S. retailers, restaurants, and other brick and mortar 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 Wi-Fi wherever they go.

Restaurants, department stores, grocery chains, fast food outlets, and healthcare providers are all keeping the U.S. consumer connected because doing so is a simple but highly effective way to improve their customers' experiences.

But just how good is this connectivity? How is it being used? And what new light can it shed on the retail and connectivity habits of the U.S. consumer? Using anonymized data gathered from more than 350,000 U.S. smartphones, a subset of Devicescape-enabled handsets active in the U.S. during November 2015, we set about finding some answers.

In this report, part of the Devicescape Wi-Fi Intelligence series, we identify the brands leading the charge in terms of Wi-Fi quality and usage.



▶ KEY FINDINGS



Restaurants lead the field: 11 of the top 20 brands for free Wi-Fi quality were restaurants or fast food outlets.



Restaurant and brewhouse chain **BJ's** and restaurant chain **Olive Garden** offered the best quality free Wi-Fi of the brands surveyed.



Size matters: **McDonald's** and **Walmart** dominate in footfall volumes and are the two most interconnected brands.



Grocery chain **Whole Foods Market** is the most generous retailer, giving its customers more connectivity and data than other retailers surveyed.



U.S. Smartphone users consume more data per minute at **Starbucks** than at any other brand surveyed.



“Restaurants, department stores, grocery chains, fast food outlets, and healthcare providers are all keeping the U.S. consumer connected because doing so is a simple but highly effective way to improve their customers’ experiences”

Restaurants serve up the best quality U.S. Wi-Fi

11 of the top 20 brands for Wi-Fi QoS were eateries.

The U.S. retail sector 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 numerous locations operated by a large number of popular U.S. service and retail chains, and the results explode the myth that free Wi-Fi is just a coffee shop phenomenon.

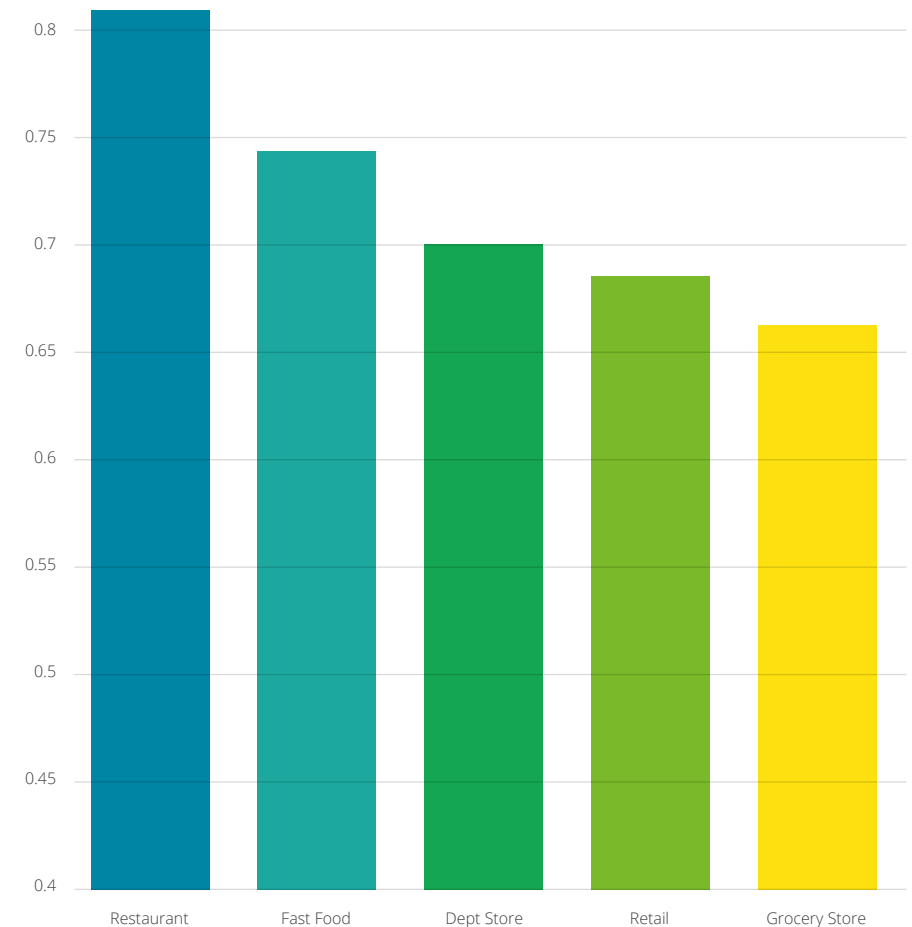
Restaurant chains BJ's and Olive Garden offered the best quality Wi-Fi of the brands surveyed, with retailers Lowe's and Michael's, and department store Macy's rounding out the top five.

Indeed, judged by sector, it was Restaurants and Fast Food establishments that emerged as the providers of the best quality Wi-Fi, followed by Department Stores, Retail outlets, and Grocery Stores.

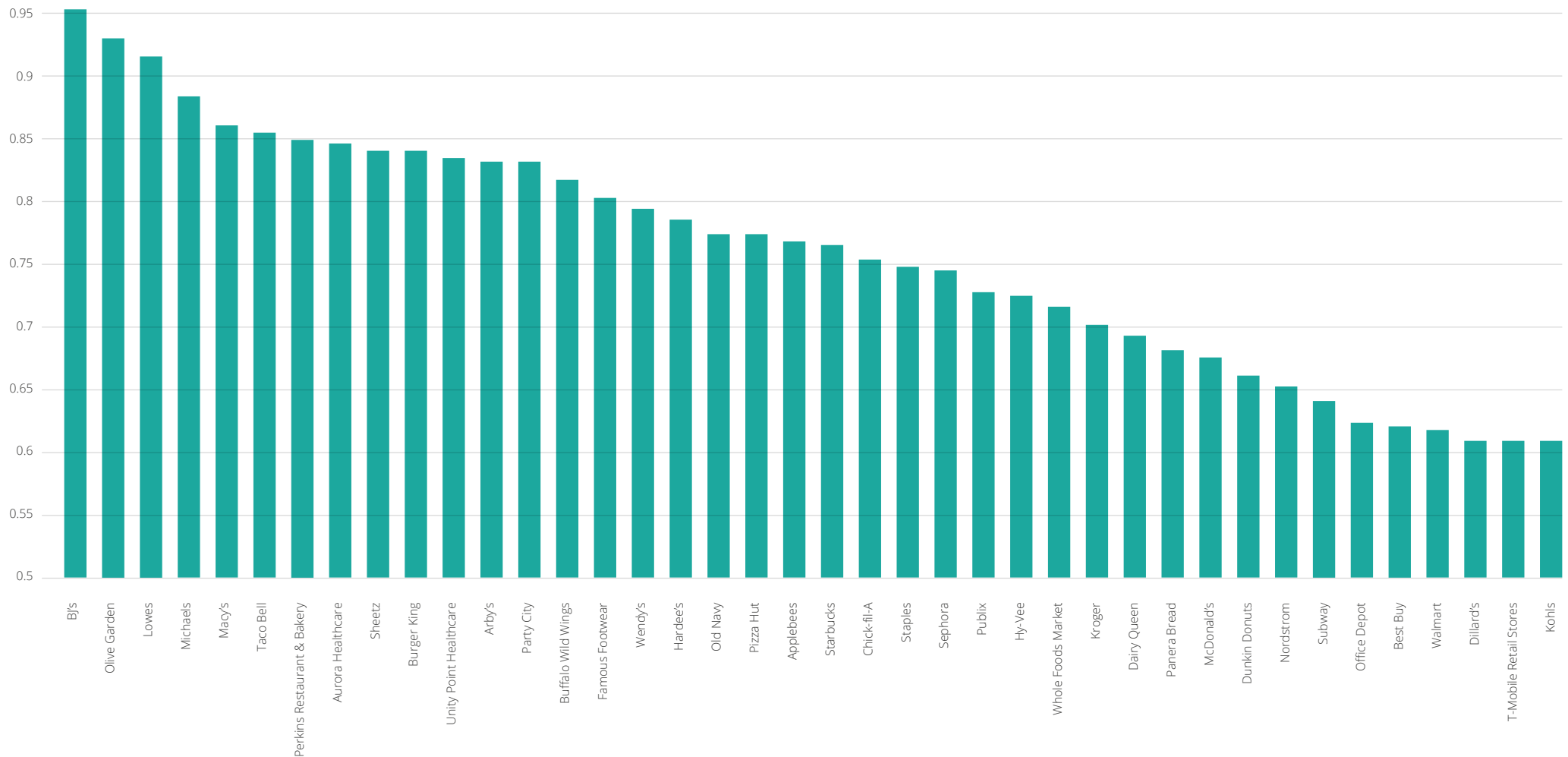
More than half of the top 20 brands for Wi-Fi QoS were restaurant or fast food chains, illustrating just how important connectivity has become to the experience offered by America's leading dining brands.

Coffee Shops may have been the original Wi-Fi innovators but neighboring brands have clearly watched and learned. The top 40 brands for Wi-Fi QoS included a range of restaurants, retailers, supermarkets and healthcare providers.

Wi-Fi Quality of Service by Sector:



Leading U.S. Brands by Wi-Fi Quality of Service:



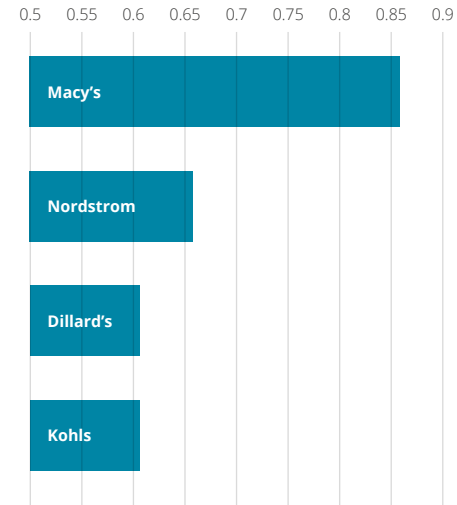
Free Wi-Fi? It's all good

"Today's consumer wants to know if they can get good Wi-Fi wherever they go, so it's great to be able to name some Wi-Fi winners," said **Dave Fraser, CEO, Devicescape.**

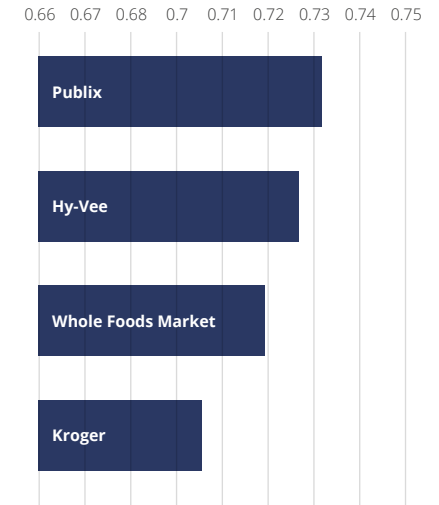
"But the bigger picture revealed by our study shows an abundance of great Wi-Fi at all sorts of locations. Any network which scores above 0.6 on our QoS scale can easily support streaming video to a smartphone."

"Nonetheless, the leaders are clear in each category, so we'd like to congratulate BJ's, Taco Bell, Macy's, Lowe's and Publix for having the best Wi-Fi QoS in their respective sectors."

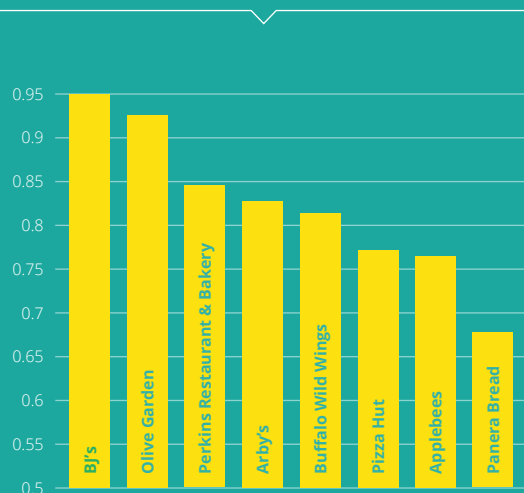
Leading Department Store Brands by Wi-Fi QoS



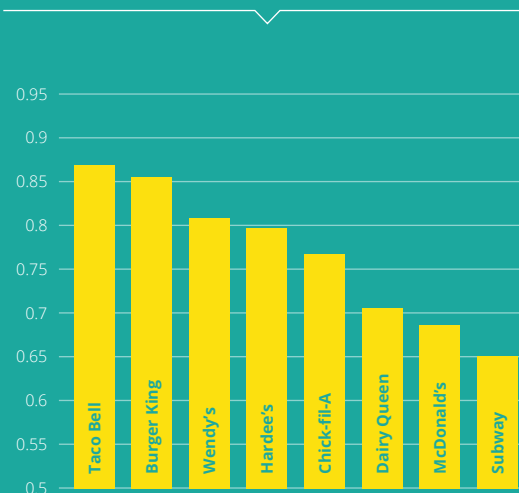
Leading Grocery Stores by Free Wi-Fi QoS



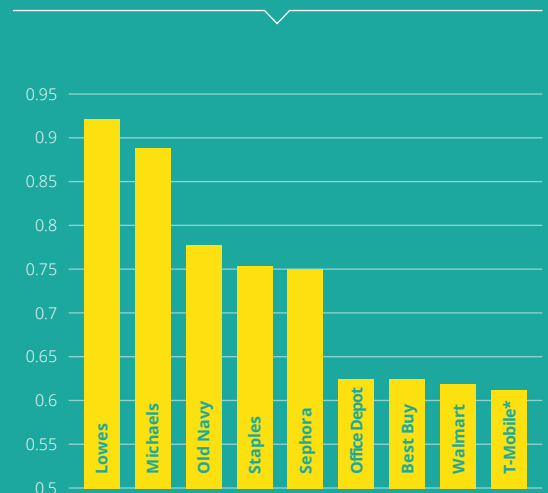
Leading Restaurant Brands by Wi-Fi QoS



Leading Fast Food Brands by Wi-Fi QoS



Leading Retail Brands by Wi-Fi QoS



*Refers to T-Mobile retail stores

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 represents a good quality Wi-Fi connection.

Why not just compare speed?

Speed is a measure everyone can understand. But the throughput speed delivered by a Wi-Fi network varies tremendously over time, affected by a range of factors. This is why we don't use speed alone to determine quality, but it remains an important part of the measurement process.

National Football League: The most interconnected brands in the U.S.

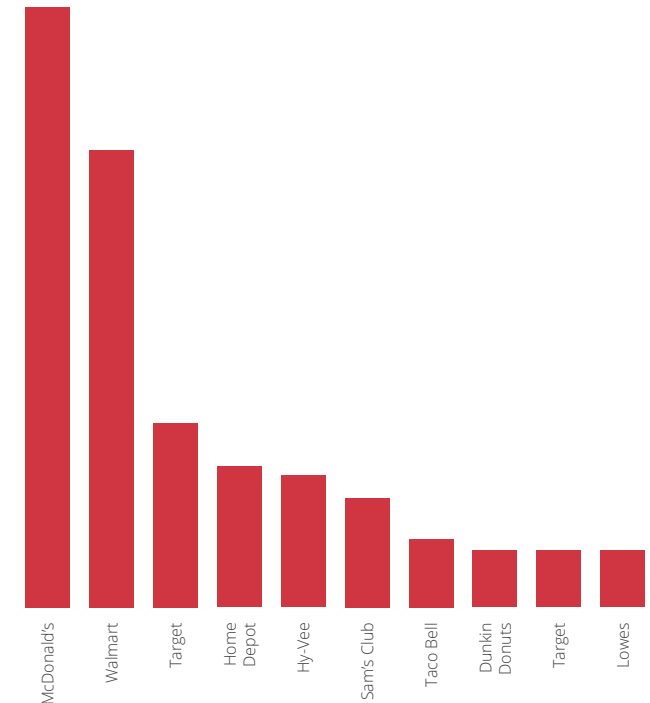
McDonald's and Walmart dominate connection volumes and brand interconnection.

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.

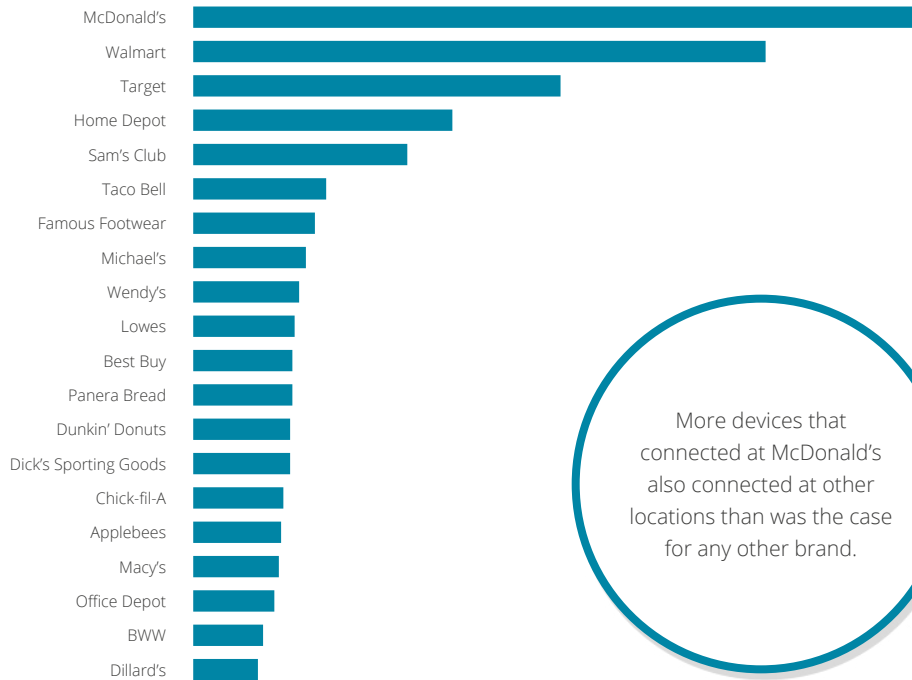
As might be expected, the brands which enable the greatest number of unique device connections are those with the largest physical footprint. In the U.S., McDonald's and Walmart were the clear leaders by this metric.

Thanks to the breadth of their physical presence, McDonald's and Walmart were also the most interconnected brands, meaning more devices that connected at their locations were found to have also connected at other locations than was the case for any other brands.

TOP 10 Brands by Unique Devices Connected:



Most Interconnected Brands in the U.S.:



More devices that connected at McDonald's also connected at other locations than was the case for any other brand.

Top 20 Brand Pairings:



The ranking of top brand pairings - the pairs of brands with the highest crossover of unique devices - once more reflects the dominance of the players with the greatest scale.



Pump up the Volumes - The brands giving customers the best Wi-Fi value

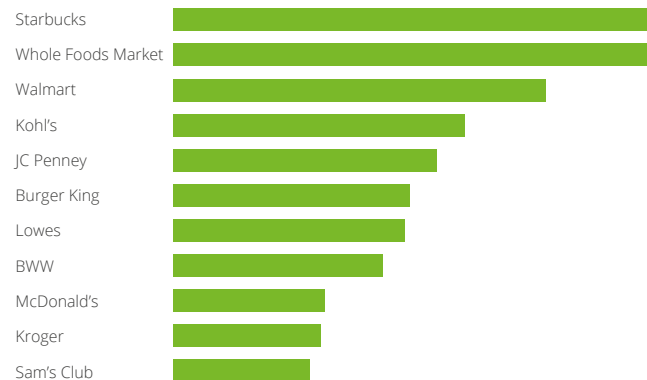
Whole Foods Market and Starbucks emerge as the most generous connectivity providers.

The brands with the largest number of visitors during the survey period were unsurprisingly those whose Wi-Fi networks delivered the largest overall volumes of data, and the greatest amount of time spent connected.

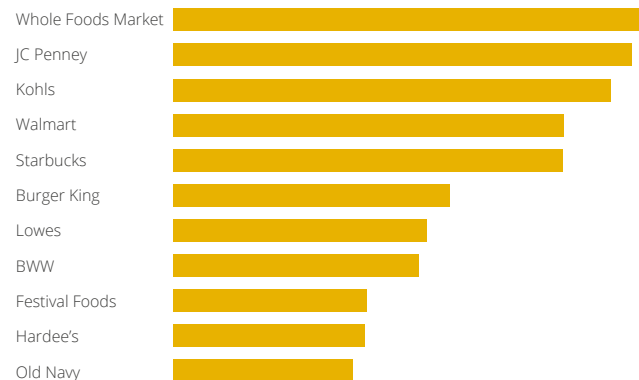
But when data consumption, connection time and unique device count were compared against one another, a different picture emerged.

Grocery chain Whole Foods Market led a strong showing from the retail sector for these metrics, which — because they measure the amount of data and connectivity brands are giving users — go to the heart of the value free Wi-Fi delivers to consumers.

Leading Brands by MB consumed per Unique Device:



Leading Brands by Time Spent Connected per Unique Device:



*"As Wi-Fi becomes a mainstream part of the customer experience offered by numerous brands it's easy to overlook the value it represents," says **Dave Fraser, CEO, Devicescape.** "As well as the free data consumers are getting in volume terms, it is also important to bear in mind that this Wi-Fi provides connectivity in indoor locations where the mobile network is often unable to deliver a decent data connection. So without this Wi-Fi consumers would often find themselves completely disconnected."*



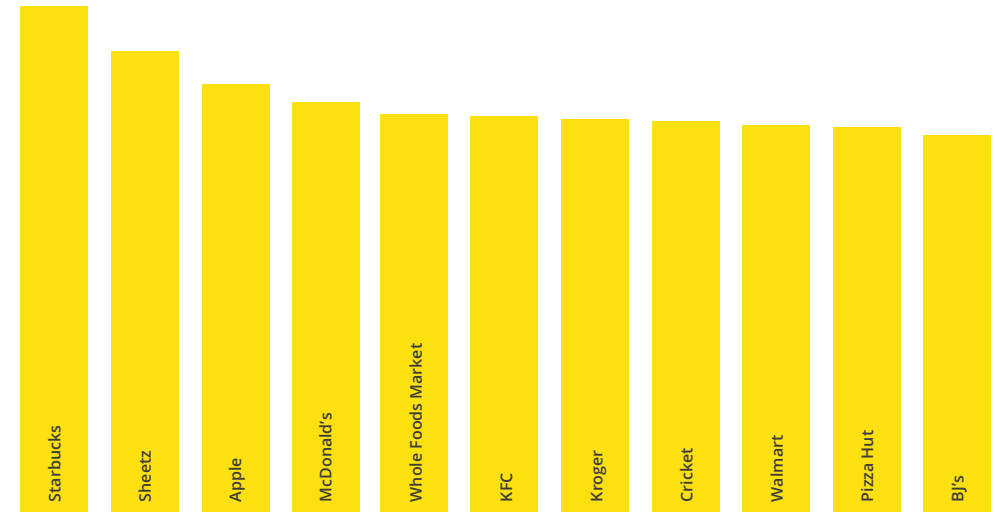
It was interesting to note that Wi-Fi Pioneer Starbucks returned a strong performance for both of these metrics, showing it remains a recognized provider of quality free connectivity.

Furthermore, Starbucks topped the table for the rate at which data was consumed over brands' Wi-Fi networks, marking it out as one of the most generous Wi-Fi providers.

By comparing overall data volumes with overall time spent connected, Devicescape was able to discern the locations where smartphone users consumed data most intensively. U.S. smartphone users evidently get more connectivity bang for their Starbucks than at any other leading brand surveyed.



Leading Brands by MB Consumed per Unit of Time:



The amount of data being consumed over U.S. amenity Wi-Fi networks is vast. The top 40 brands by number of unique devices connected during November 2015 delivered, between them, 13.5 Terabytes to the Devicescape sample base alone.

The same brands delivered more than 68 years' of time spent connected to the sample base in a single month. Despite their size, those 40 brands are just the tip of the iceberg. For this survey Devicescape gathered connectivity data at more than 1,000 retail and service brands and locations, from the smallest neighbourhood outlets right up to the largest U.S. retailers.

If all locations offering free Wi-Fi in the U.S. were taken into account, along with every smartphone user nationwide, the numbers would be astronomical.

13.5
TERABYTES

68
YEARS
CONNECTIVITY





*“Without this abundance
of shared Wi-Fi in indoor
locations, consumers
would often find
themselves completely
disconnected.”*

Conclusion

Free Wi-Fi is rapidly becoming as important to the customer experience offered by brick and mortar 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 all retail and service verticals, delivering a valuable service to a U.S. public hungry for connectivity.

Simple 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.

Devicescape assessed available Wi-Fi across a number of metrics. Different brands emerged as leaders in different categories, meaning there could be no clear winner. Several brands, however, deserve special mention for giving a strong performance across a number of metrics.

Whole Foods Market

One of only two brands to place in the top ten for each value metric, Whole Foods Market actually placed in the top five for all three. 27th for QoS rounds out a strong performance.

Walmart

The only one of the largest scale retailers to place in the top ten for all three value metrics; volume of data per unit of time, and volume of data and connection time per unique device. However, Walmart only just made the top 40 for QoS.

Starbucks

First place for data volume delivered per unit of time and top seven positions for both volume of data and connection time per unique device. Respectable 21st position for QoS.

Lowe's

Third place for QoS and ninth for both volume of data and connection time per unique device.

Burger King

Top ten placements for QoS, volume of data and connection time per unique device.

NOTES TO EDITORS

- The brands included in the survey were drawn from the brands whose Wi-Fi was most frequently connected to by the Devicescape sample base over the course of November 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 'Retail', for the purposes of this report, covers a range of popular retail and leisure destinations, including stores, restaurants, fast food outlets and healthcare providers.
- Devicescape has zero visibility of end users' personal details or identities and is able only to distinguish devices themselves from one another.

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Devicescape enables brands and service providers to give customers automated, high quality connectivity at numerous popular locations – and to engage customers while they are visiting those locations.

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