



Barometer of mobile Internet connections in Spain

01/01/2023 - 31/12/2023



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**nPerf Network
assessment**

Expert in the telecom network optimization

nPerf is an independent French company based in Lyon (France). For over a decade, nPerf has been a trusted partner for both fixed and mobile operators, providing comprehensive network testing solutions and analysis. Our mission is to accurately measure, evaluate, and enhance the understanding of Internet connectivity around the world.



300k+ tests daily
worldwide.



26Md+ coverage
scans in total.



3k+ servers all
around the world.

Test your Internet connection with nPerf!

nPerf allows you to test the quality of your fixed, mobile, or Wi-Fi Internet connections up to 10 Gb/s!
Download our app or visit our website!



2. Executive Summary



The subscribers of Movistar enjoyed the best mobile Internet performances in Spain during 2023.

Cellular Internet connections in Spain

	Digi	MasMovil/Yoigo	Movistar	Orange	Vodafone
▼ Download bitrates (Mb/s)	37.16	52.91	108.63	69.59	53.84
▲ Upload bitrates (Mb/s)	11.66	11.63	19.03	14.43	15.05
◀▶ Latency (ms)	47.44	48.01	41.22	43.42	39.55
🌐 Web browsing (%)	67.43	67.31	69.45	67.39	69.14
🎥 Youtube streaming (%)	80.70	79.85	82.33	80.99	82.22
nPerf Score (nPoints)	69 787	73 270	89 031	79 568	79 590

Source : nperf.com



Best mobile Internet performance
in 2023




Source : nperf.com



Source : nperf.com

The subscribers of Movistar enjoyed the best 5G mobile connections in Spain during 2023.

5G mobile connections in Spain

	MasMovil/Yoigo	Movistar	Orange	Vodafone
▼ Download bitrates (Mb/s)	123.59	214.31	180.59	136.92
▲ Upload bitrates (Mb/s)	21.53	29.93	26.99	26.38
◀▶ Latency (ms)	41.38	36.76	37.34	34.20
🌐 Web browsing (%)	71.98	75.37	75.30	75.22
🎬 Youtube streaming (%)	82.51	85.59	84.72	84.03
 nPerf Score (nPoints)	92 885	107 546	103 882	101 067

Source : nperf.com

Movistar: the market leader

In the Spanish telecom market, Movistar emerges as the clear leader based on overall performance metrics. With an impressive total score of 89,031 nPoints, Movistar outpaces its competitors. Movistar sets the benchmark with the highest download speed at 109 Mbps and an upload speed of 19 Mbps. Its latency stands at 41 ms, complemented by a browsing score of 69% and a streaming score of 82%. These figures underline Movistar's superior network performance and reliability.

Vodafone: consistent performer

Vodafone demonstrates consistent performance across the board, marked by a download speed of 54 Mbps and an upload speed of 15 Mbps. It stands out with the best latency among the competitors at 39.6 ms, alongside strong browsing and streaming scores of 69% and 82%, respectively, leading to a total score of 79,590.

Orange: the strong contender

Orange, with a total score of 79,568, showcases commendable performance, especially with a download speed of 70 Mbps and an upload speed of 14 Mbps. Its network shows resilience with a latency of 43 ms, and it maintains competitive browsing and streaming scores of 67 and 81, respectively.

MasMovil/Yoigo: The Challenger

MasMovil/Yoigo, with a total score of 73,270, presents itself as a formidable challenger. It boasts a download speed of 53 Mbps and an upload speed identical to Orange and Movistar at 12 Mbps. Its latency and browsing scores are on par with the market, and it offers competitive streaming quality with a score of 80%.

Digi: room for improvement

Digi, while trailing with a total score of 69,787 nPoints, shows potential for growth. It offers a download speed of 37 Mbps and an upload speed of 12 Mbps, with latency at 47 ms.

Movistar leading the 5G network performance

In the dedicated 5G segment, Movistar once again leads with a staggering download speed of 214 Mbps and an upload speed of 30 Mbps, complemented by a low latency of 37 ms. Its browsing and streaming capabilities are unmatched, reflected in scores of 75% and 86%, respectively, resulting in the highest 5G total score of 107,546 nPoints.

Orange and Vodafone follow with impressive 5G capabilities, showcasing significant improvements in speeds and reduced latencies. MasMovil/Yoigo also demonstrates a strong 5G offering, which could be a game-changer in its market positioning and competitive strategy.

Market perspectives

The analysis reveals Movistar's dominance in both traditional telecom and 5G technologies, indicating a well-established infrastructure and a strong focus on customer experience. Orange and Vodafone maintain competitive positions with robust performances and are closely followed by the dynamic and evolving offerings of MasMovil/Yoigo.

4. Methodology



nPerf provides a **free tool to assess Internet connection quality** via its website and mobile apps (Android, iOS). Daily, thousands of people rely on nPerf for speed tests in their country, contributing to a comprehensive crowdsourced database covering all operators.

The study employs a strong filtering method to reflect real customer experiences on a specific network (mobile or fixed line). Measures are taken to prevent probes and measurement robots from affecting the results.

For mobile connections, we assess:

▼ Download bitrate :

Indicates the amount of data your connection can receive in one second from the nPerf server. The highest the measured value, the best is the bitrate of your connection.

▲ Upload bitrate :

Indicates the amount of data your connection can send in one second from the nPerf server. The highest the measured value, the best is the bitrate of your connection.

◄► Latency (ping) :

It indicated the delay a small packet of data requires to make a round-trip from your computer to the nPerf server. The shorter the delay, the most reactive your connection is. The main is the minimum value.

🌐 Browsing performance :

The browsing test assesses the load time of the fully loaded pages, including images, JavaScript, CSS, and fonts, for the five most popular sites. This indicator reflects the user's perceived quality of the Internet network.

📺 Streaming performance :

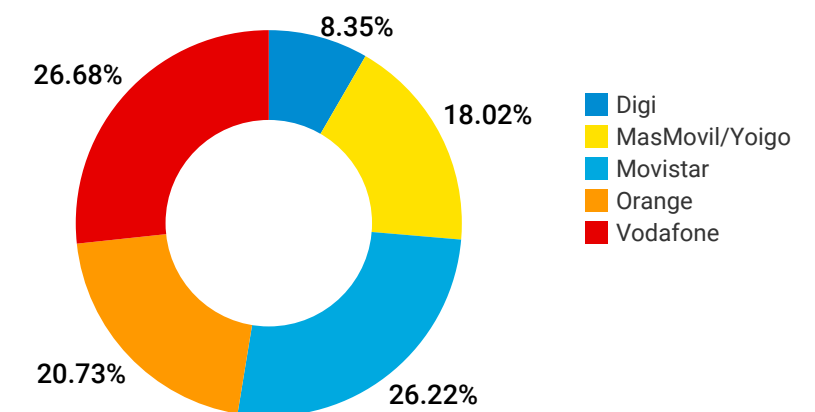
The video streaming test gauges the load time of a fully loaded video in three resolutions on YouTube, considering stalls during playback. This indicator reflects the user's perceived quality of the Internet network.

Statistical precision is crucial in accurately determining winners. At nPerf, we prioritize test quality, precise reporting, and transparency. Analyzing a large volume of tests in this study, we've achieved 3 % precision for absolute values and 1 point for percentage-based results, highlighting the reliability and accuracy of our data.

For a more comprehensive understanding of the user experience, our report features test results during both Busy hours (6 PM to 11 PM) and Idle hours (the rest of the day). Busy hours, marked by network strain, can impact user experience through congestion. This approach helps in understanding how network performance fluctuates throughout the day.

We only include national Internet service providers with test share above 5% share. The chart below shows the overall test distribution for each service provider.

Overall distribution of the tests per provider (ISPs Share)



Source : nperf.com



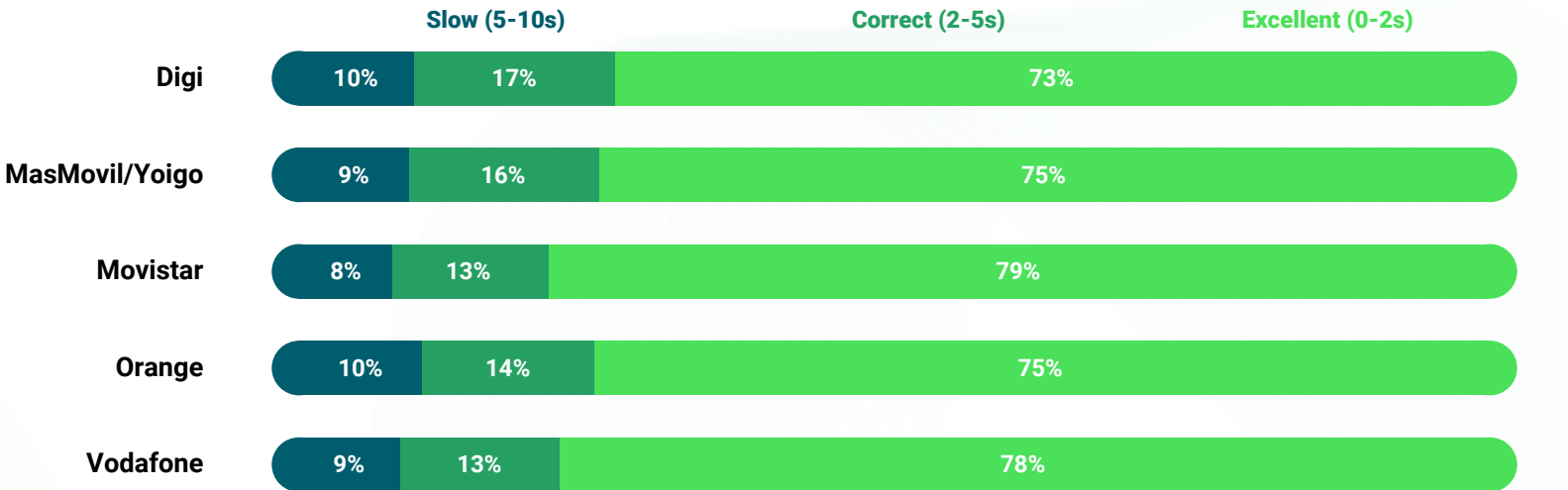
Browsing Performance rate (average)



Source : nperf.com

The subscribers of Movistar and Vodafone enjoyed the best mobile Internet browsing performance in 2023.

Browsing Performance results ventilation (average)



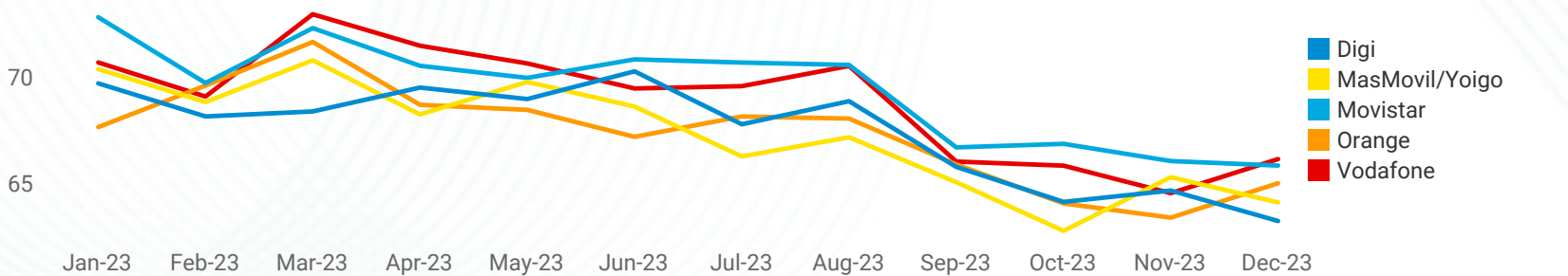
Source : nperf.com

Browsing Performance rate (average)



Source : nperf.com

Browsing performance rate (average) evolution over the year



Source : nperf.com



Quality of Experience : Streaming



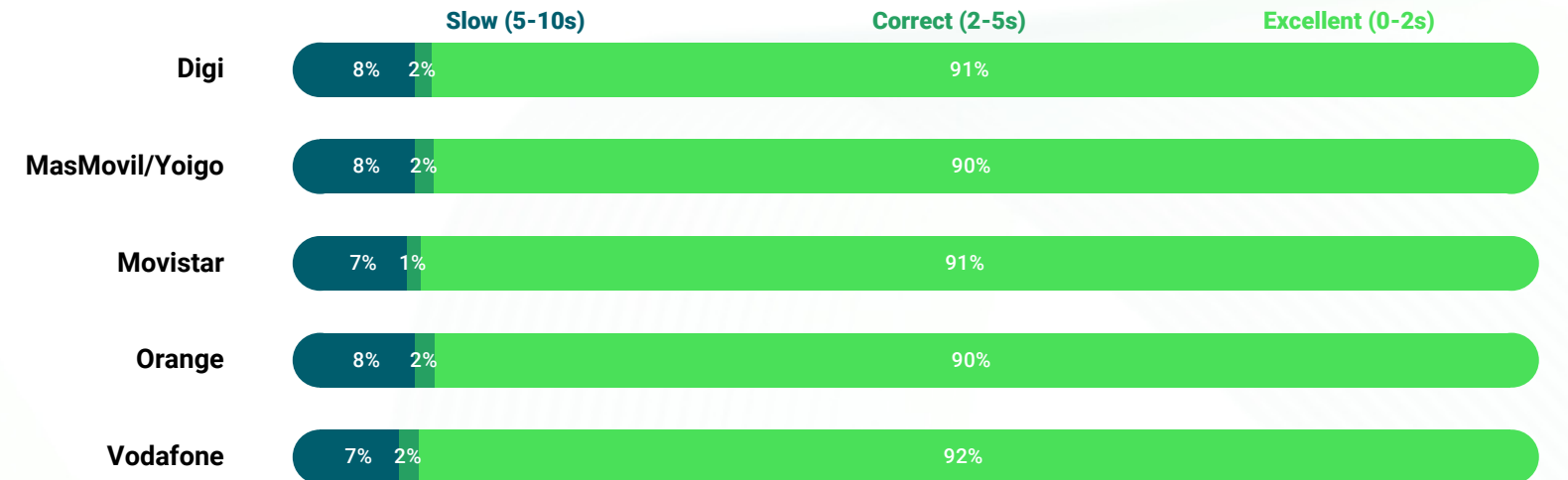
Streaming Performance rate (average)



Source : nperf.com

The subscribers of Movistar and Vodafone enjoyed the best mobile Internet streaming performance in 2023.

Streaming Performance results ventilation (average)



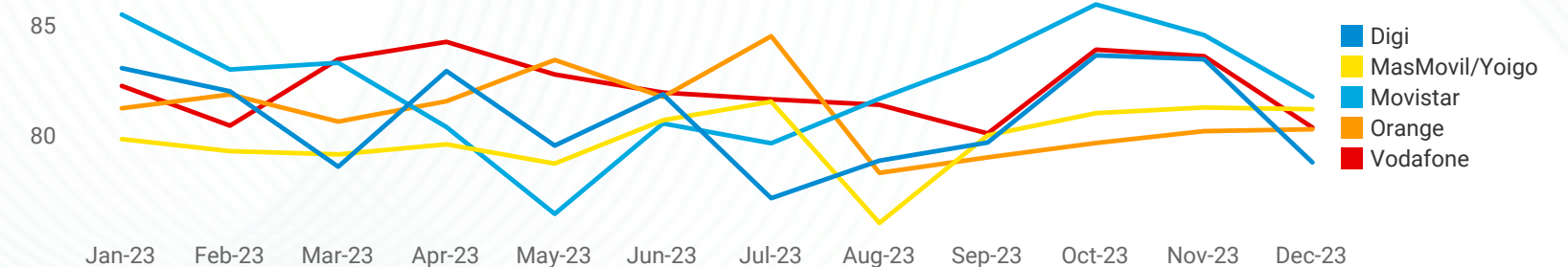
Source : nperf.com

Streaming Performance rate (average)



Source : nperf.com

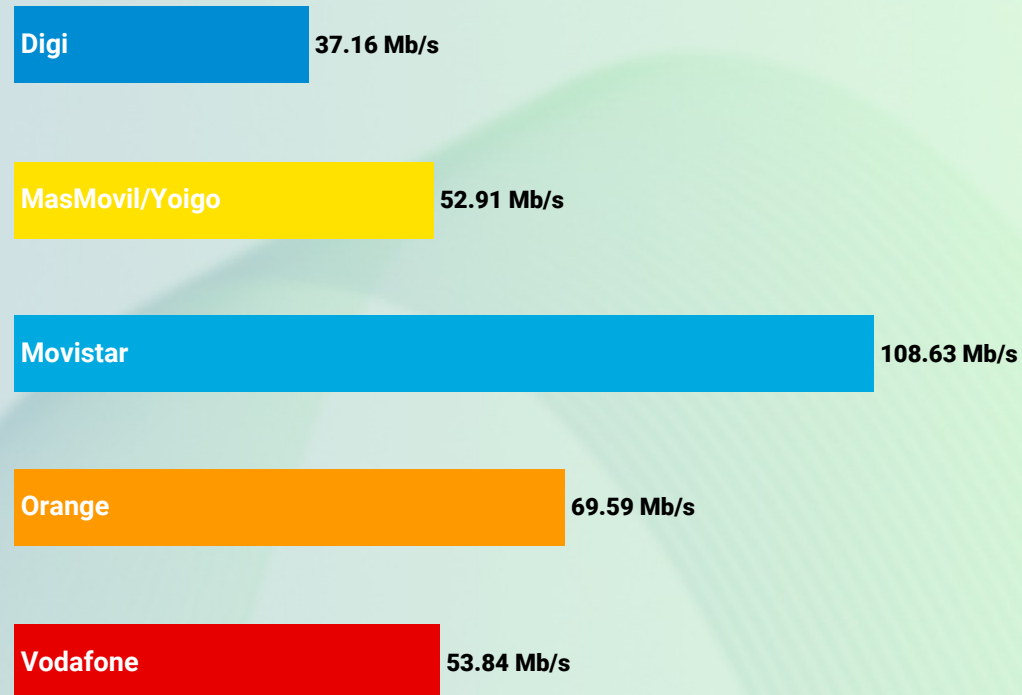
Streaming performance rate (average) evolution over the year



Source : nperf.com



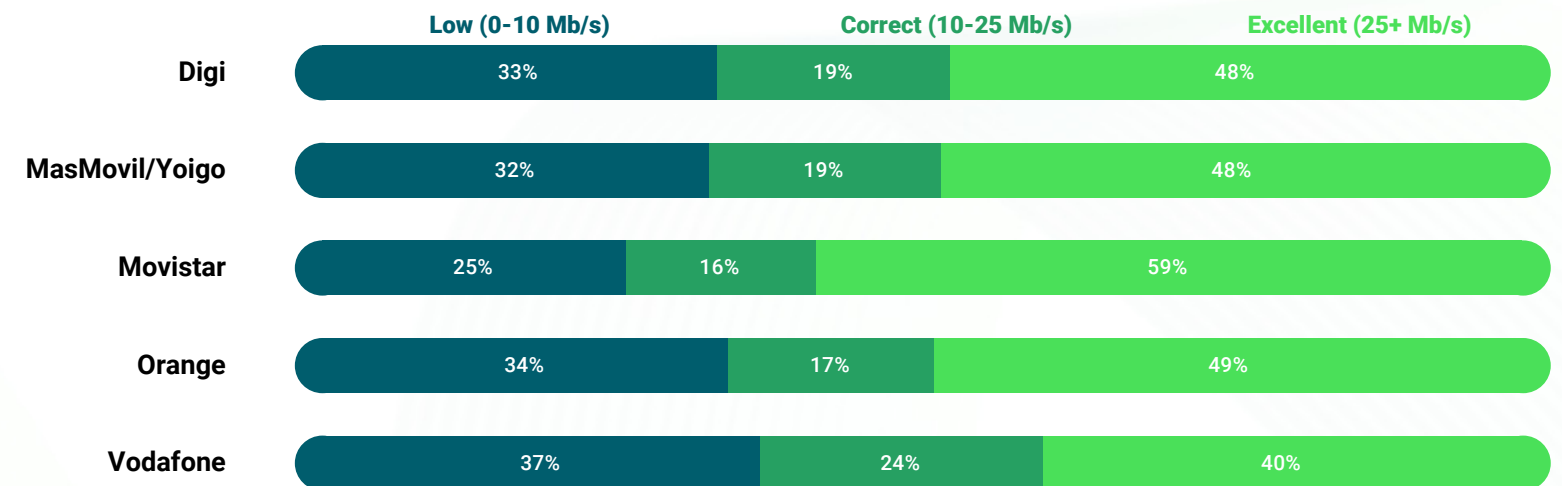
Download Speed (average)



Source : nperf.com

The subscribers of Movistar enjoyed the best average mobile Internet download speed in 2023.

Download Speed results ventilation (average)



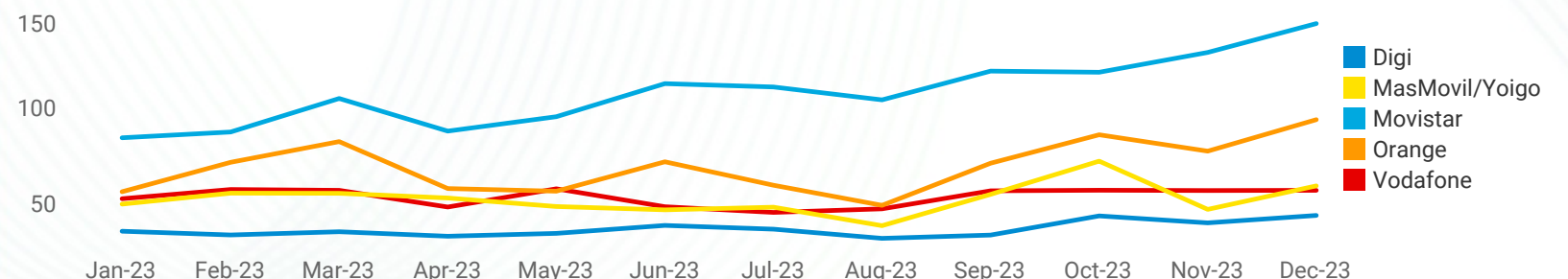
Source : nperf.com

Download Speed (average)



Source : nperf.com

Download Speed evolution over the year (average)



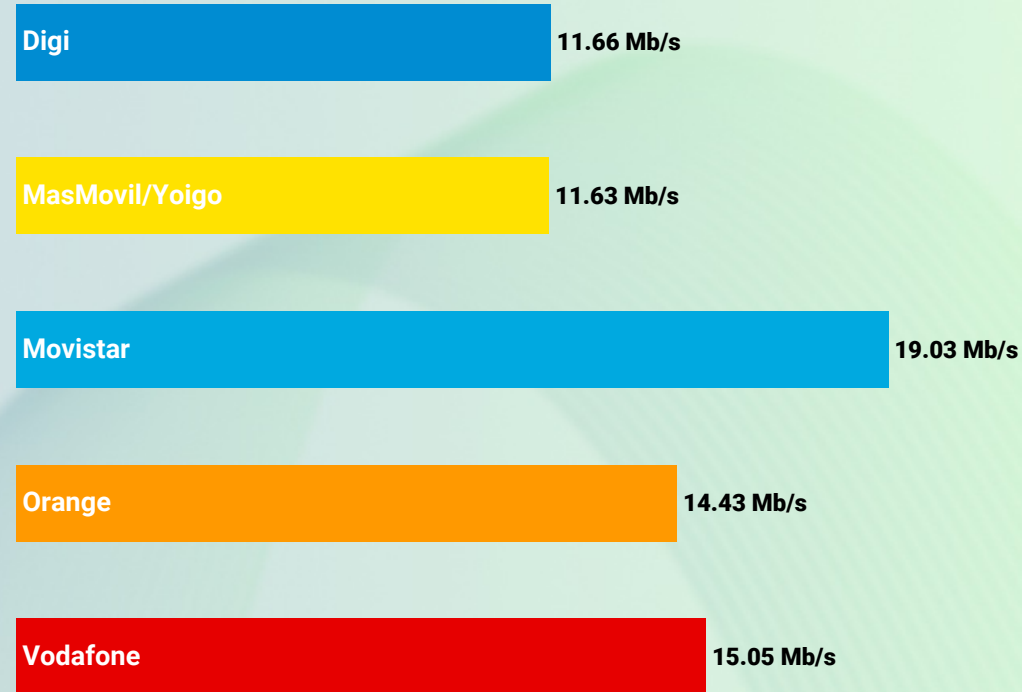
Source : nperf.com



Speed : Upload



Upload Speed (average)



Source : nperf.com

The subscribers of Movistar enjoyed the best average mobile Internet upload speed in 2023.

Upload Speed results ventilation (average)



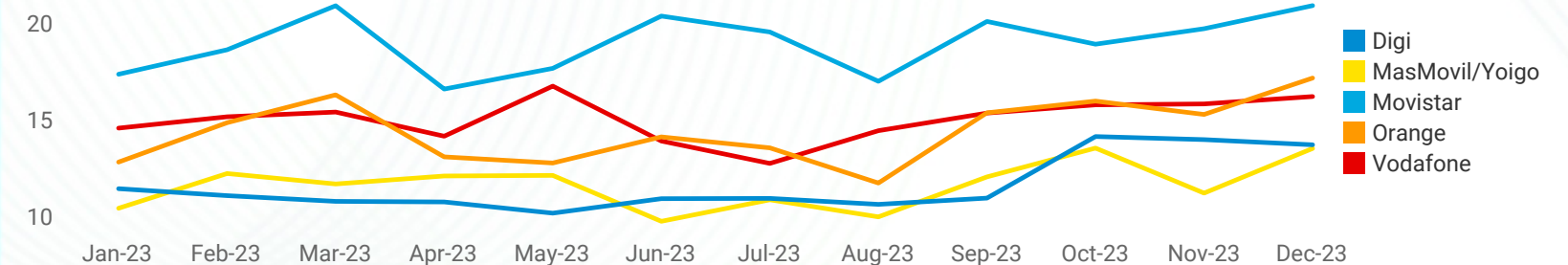
Source : nperf.com

Upload Speed (average)



Source : nperf.com

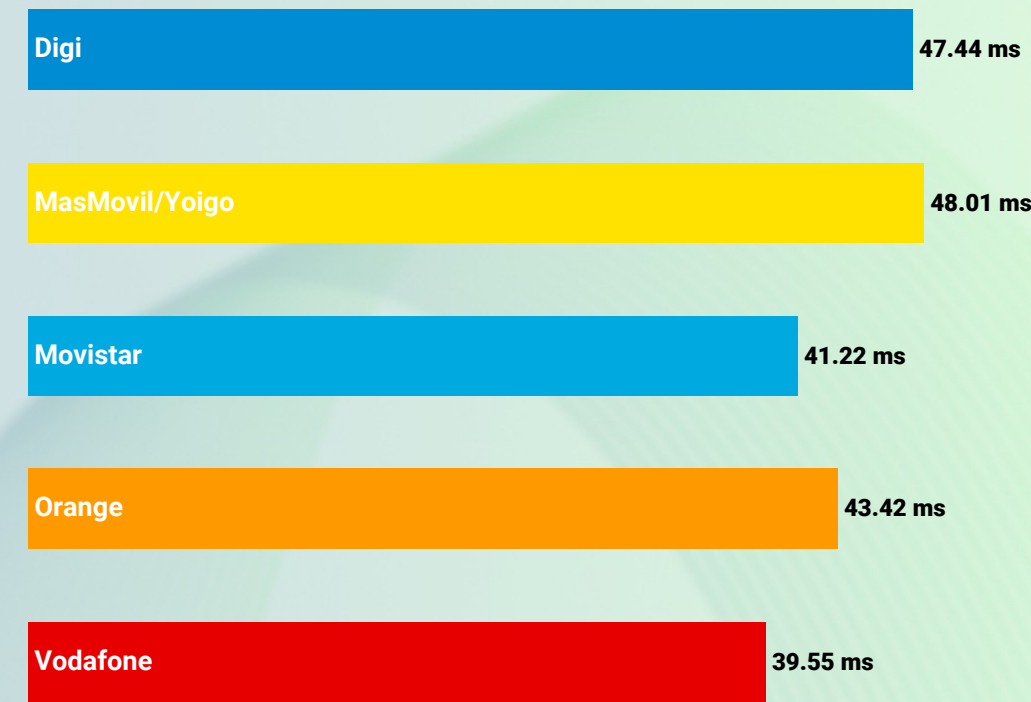
Upload Speed evolution over the year (average)



Source : nperf.com



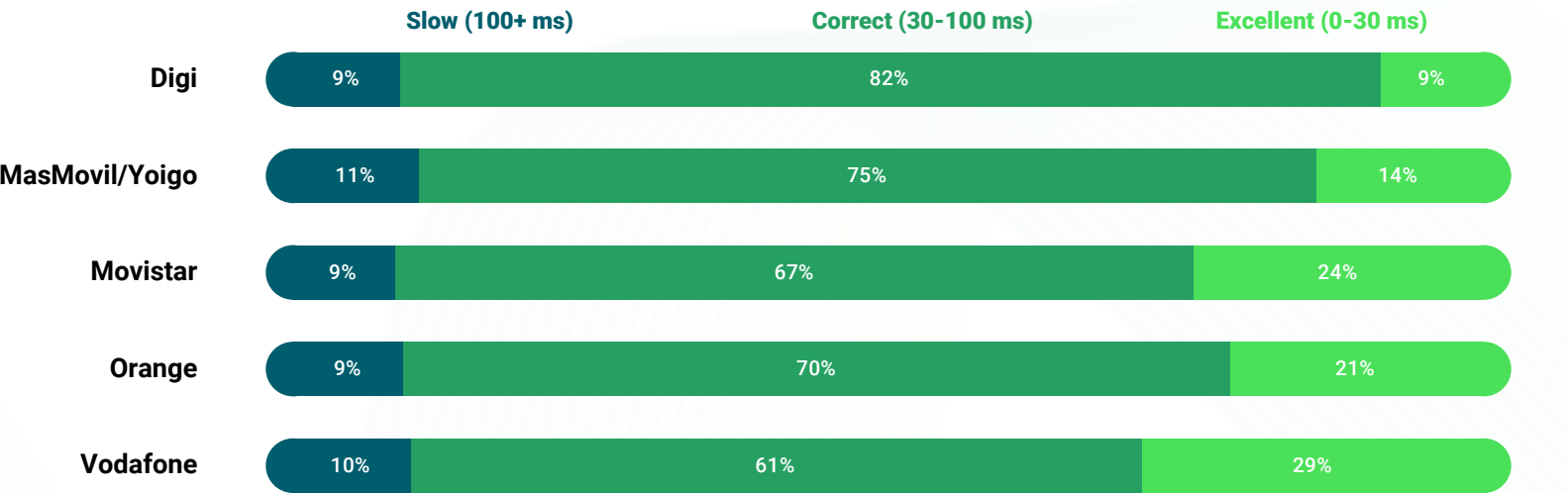
Latency Speed (average)



Source : nperf.com

The subscribers of Vodafone enjoyed the best average mobile Internet latency speed in 2023.

Latency Speed results ventilation (average)



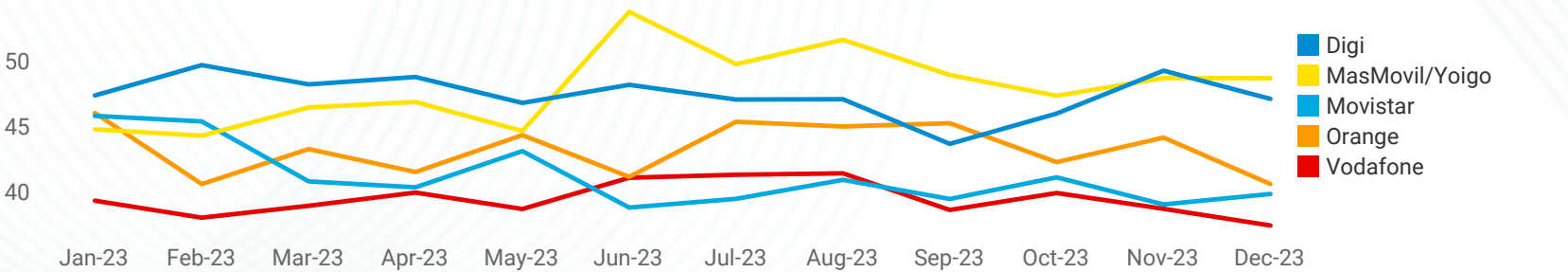
Source : nperf.com

Latency Speed (average)



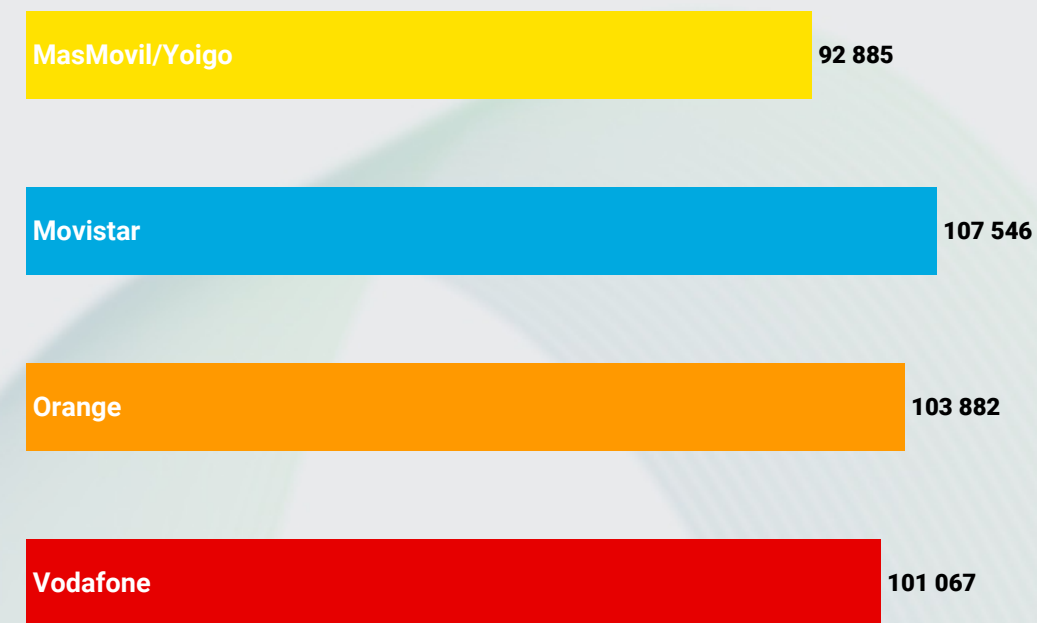
Source : nperf.com

Latency Speed evolution over the year (average)



Source : nperf.com

5G nPerf score (average)



Source : nperf.com

The subscribers of Movistar enjoyed the best 5G mobile connections in Spain during 2023.

- Best 5G Mobile Performance : Movistar (107 546 nPoints)
- Best 5G Mobile Download speed : Movistar (214.31 Mb/s)
- Best 5G Mobile Upload speed : Movistar (29.93 Mb/s)
- Best 5G Mobile Latency speed : Vodafone (34.20 ms)
- Best 5G Mobile Browsing experience : Movistar (75.37 %), Orange (75.30 %) and Movistar (75.22 %)
- Best 5G Mobile Video experience : Movistar (85.59 %) and Orange (84.72 %)

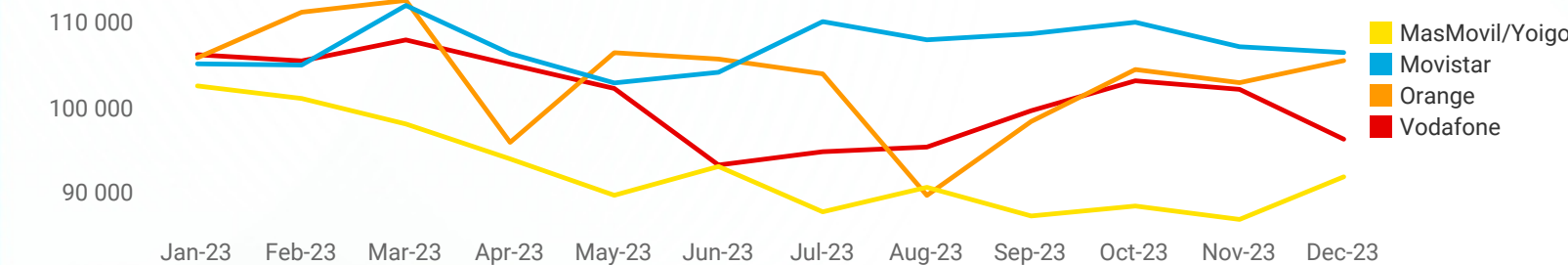
Source : nperf.com

5G nPerf score (average)



Source : nperf.com

nPerf score evolution over the year (average)

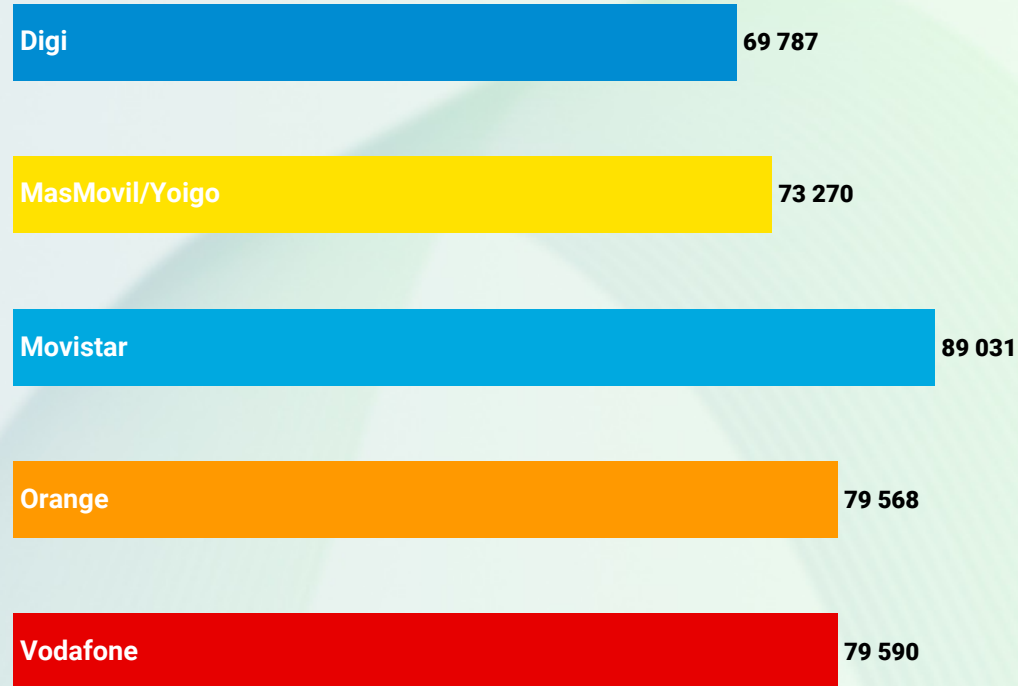


Source : nperf.com

Mobile Internet performance in Spain



nPerf Score (nPoints)



Source : nperf.com

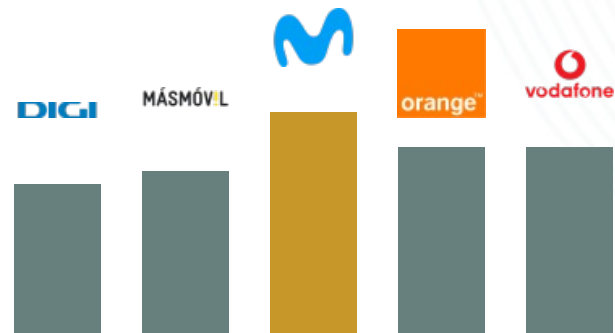
The subscribers of Movistar enjoyed the best mobile Internet performances in Spain during 2023.

The nperf score takes into account the measured bitrates, the latency and the Qoe tests. The value of the points for the rates and the latency is calculated on a logarithmic scale, to better represent the perception of the user.

Thus, this score reflects the overall quality of the connection experienced by the user.

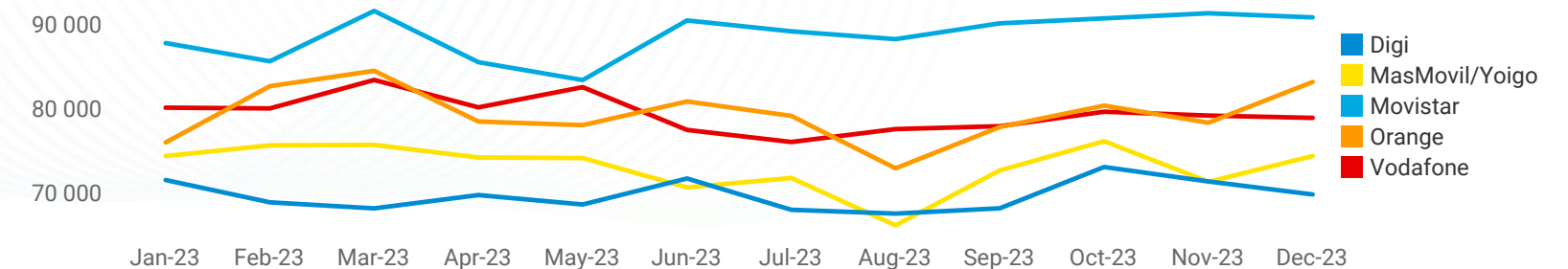
Source : nperf.com


Best mobile Internet performance
in 2023



Source : nperf.com

nPerf score evolution over the year (average)



Source : nperf.com

