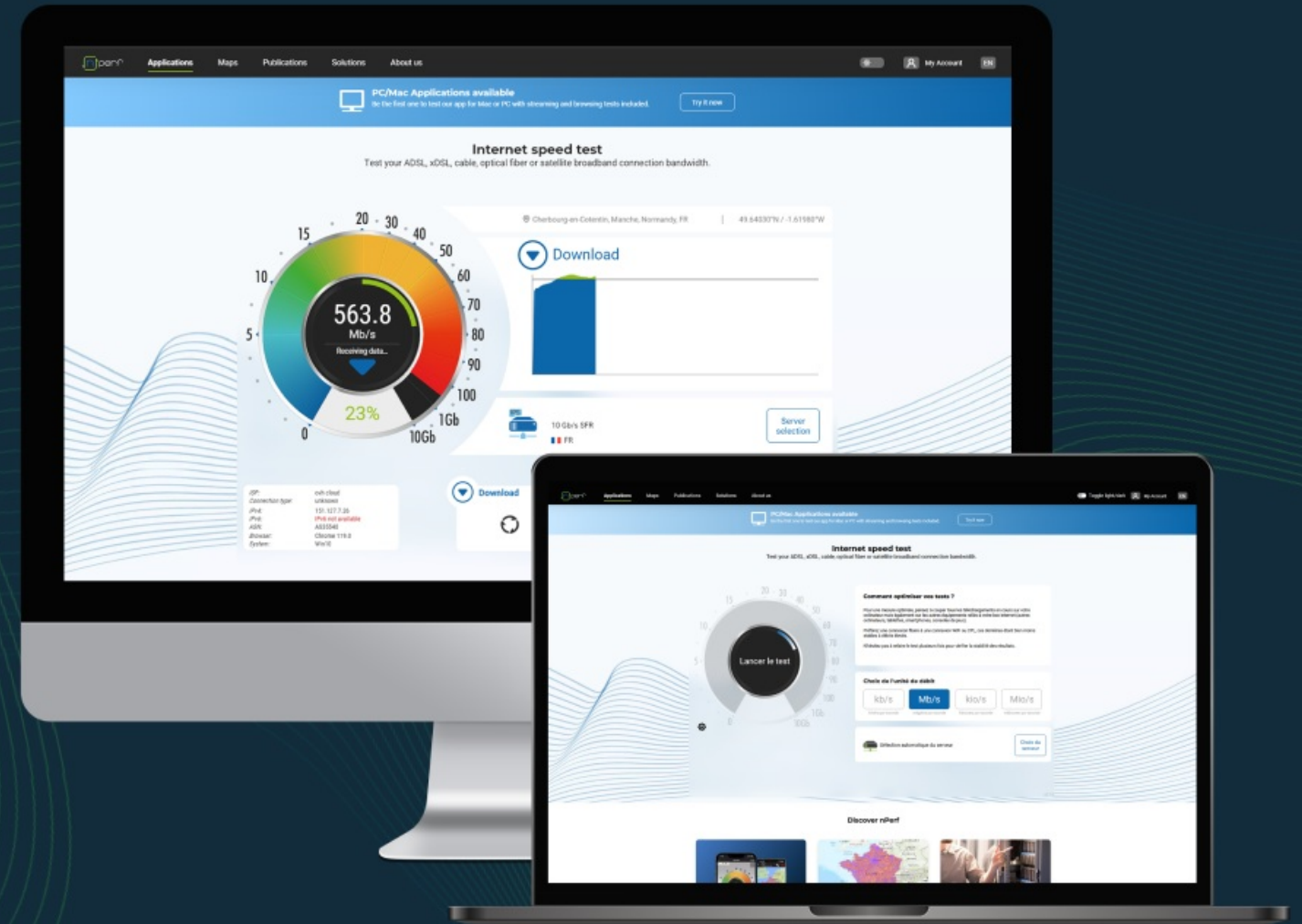




Barometer of fixed Internet Connections in Portugal.

01/01/2023 - 31/12/2023



1

**Introducing
nPerf**

2

**Executive
summary**

3

Analysis

4

Methodology

5

**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.



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worldwide.



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Test your Internet connection with nPerf!

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2. Executive Summary



The subscribers of MEO , Vodafone and NOS enjoyed the best broadband performances in Portugal during 2023.

Fixed Internet connections in Portugal

	MEO	NOS	Vodafone
▼ Download bitrates (Mb/s)	212.81	217.43	209.28
▲ Upload bitrates (Mb/s)	101.32	73.19	81.29
◀▶ Latency (ms)	17.01	17.37	16.79
 nPerf Score (nPoints)	157 391	154 834	155 607




Best fixed Internet performance
in 2023



Source : nperf.com

FTTH Fixed Internet connections in Portugal

	MEO	NOS	Vodafone
▼ Download bitrates (Mb/s)	378.33	452.40	400.91
▲ Upload bitrates (Mb/s)	168.12	153.39	149.98
◀▶ Latency (ms)	12.50	10.86	11.08
 nPerf Score (nPoints)	174 710	178 302	176 032

MEO

NOS

vodafone



Source : nperf.com

In this analysis, we explore the fixed Internet market in Portugal, focusing on the performance of key Internet Service Providers (ISPs) including MEO, NOS, and Vodafone. We evaluate their services based on essential metrics such as download and upload bitrates, latency, and overall nPerf scores to understand their impact on user experiences in areas like web browsing and streaming.

MEO: leader of leaders with good performance

MEO takes the lead with an nPerf score of 157,391 nPoints, reflecting its overall superior quality of service in the Portuguese fixed Internet market. With a download speed of 212.81 Mb/s and an upload speed of 101.32 Mb/s, MEO offers a balanced Internet experience, suitable for both downloading content and online interactions requiring high download speeds. important, such as videoconferencing. The 17.01ms latency further ensures a responsive and smooth online experience for MEO users.

Vodafone: Close Contender with Strong Offering

Vodafone secures a close second with an nPerf score of 155,607 nPoints, showcasing its competitive service quality. The provider offers a download bitrate of 209.28 Mb/s and an upload bitrate of 81.29 Mb/s, ensuring reliable performance for standard Internet usage, including HD streaming and online gaming. Vodafone stands out with the lowest latency among the three at 16.79 ms, emphasizing its capacity to provide a swift and efficient Internet service.

NOS: Competitive service with room for improvement

NOS ranks third with an nPerf score of 154,834 nPoints, just behind Vodafone. It offers the highest download speed among ISPs at 217.43 Mbps, effectively meeting high bandwidth demands. However, its download bitrate of 73.19 Mbps is the lowest, which could limit performance in download-intensive tasks. With a latency of 17.37 ms, NOS offers a fairly responsive Internet experience, although there is still room for improvement to compete with its competitors. However, NOS is the leader in residential internet (FTTH).

Conclusion

The fixed Internet landscape in Portugal presents a hotly contested market between MEO, Vodafone and NOS, each offering unique strengths. MEO comes out on top with the highest nPerf score, reflecting its balanced, high-quality service, while Vodafone, with the lowest latency, offers a very responsive service, making it an attractive option for users with latency-sensitive needs. NOS, despite having the highest download bitrate, has room for improvement, particularly in terms of download speeds, but offers better home Internet service (FTTH).

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 fixed 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) :

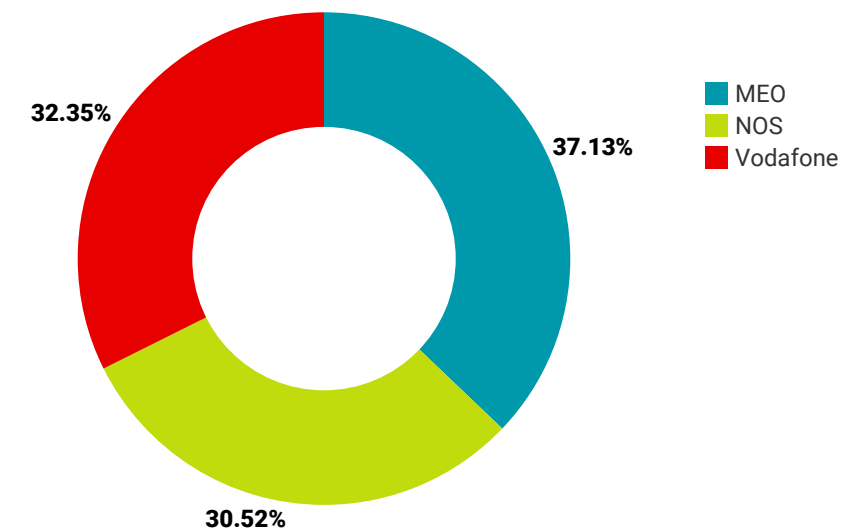
It indicated the delay a small packet of data requires to make a round-trip from your computer to the nPerf server. The shorter the delay, the most reactive your connection is. The main is the minimum value.

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



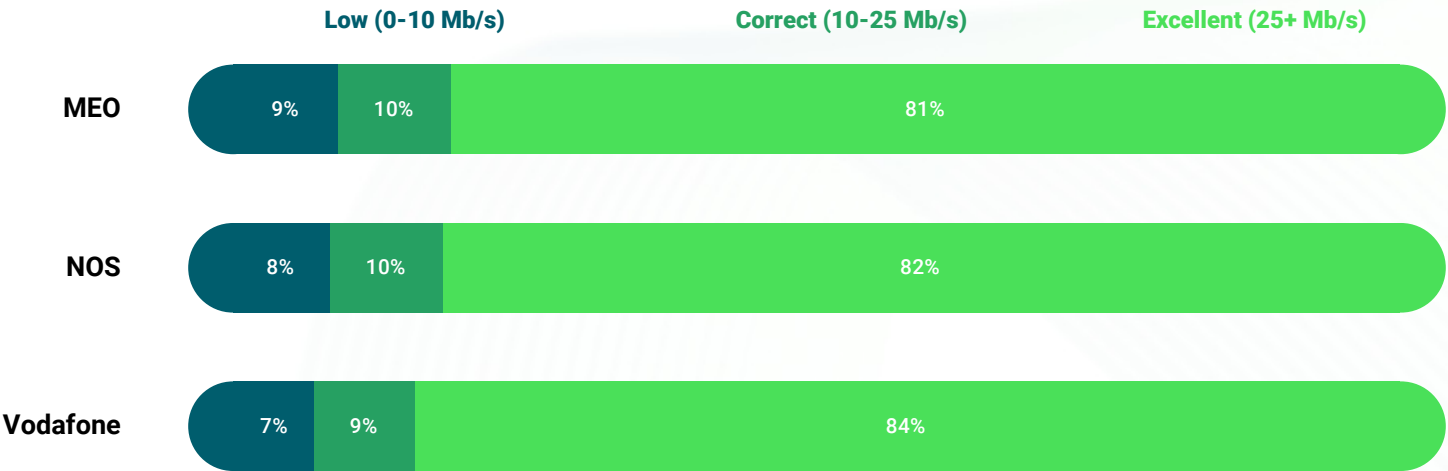
Download Speed (average)



Source : nperf.com

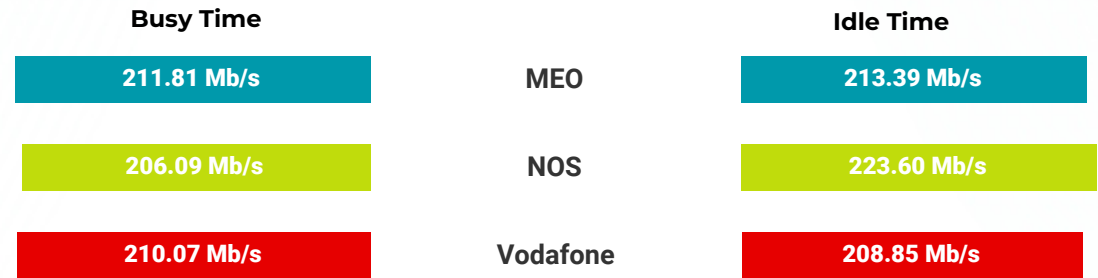
The subscribers of NOS and MEO enjoyed the best average broadband download speed in 2023.

Download Speed results ventilation (average)



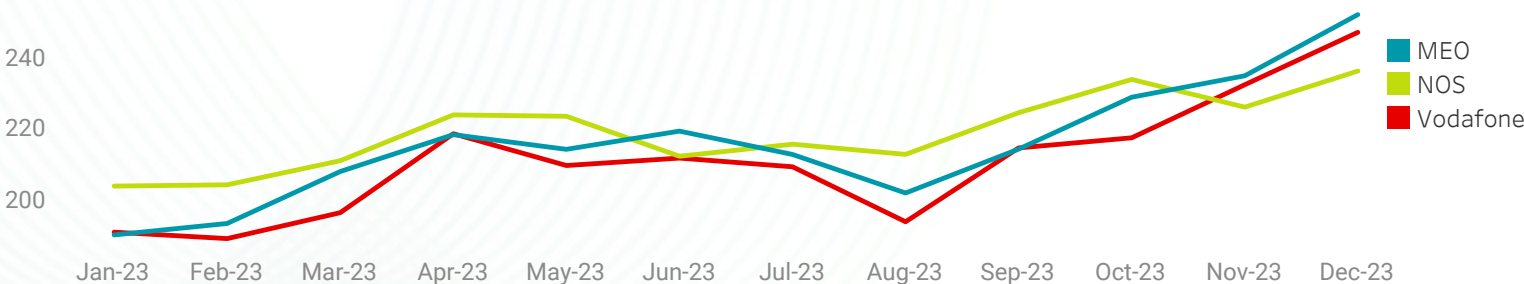
Source : nperf.com

Download Speed (average)



Source : nperf.com

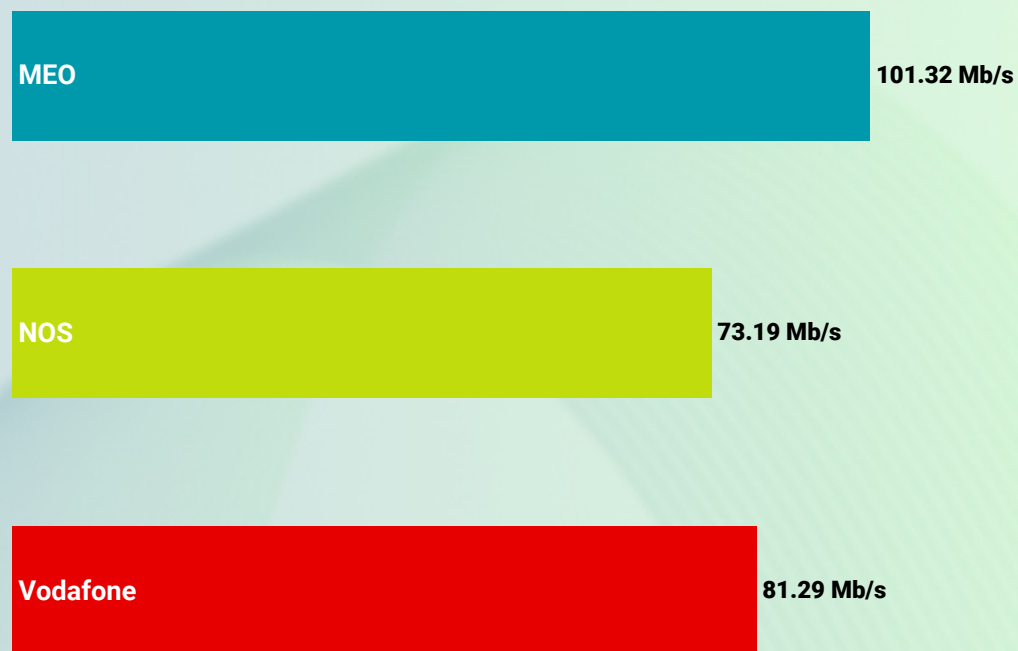
Download Speed evolution over the year (average)



Source : nperf.com



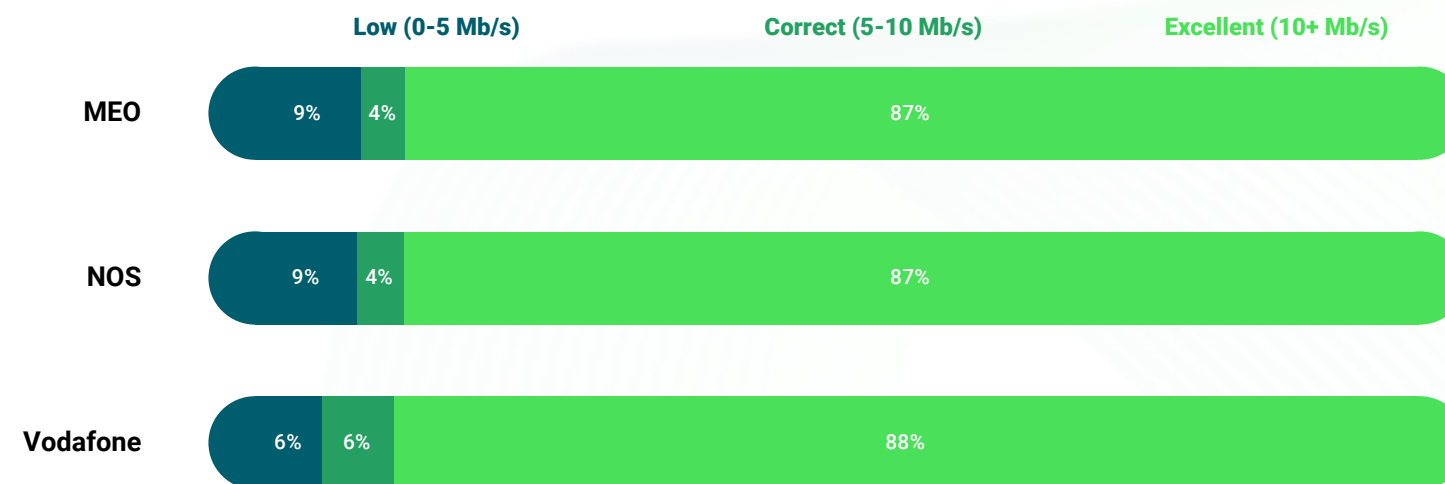
Upload Speed (average)



Source : nperf.com

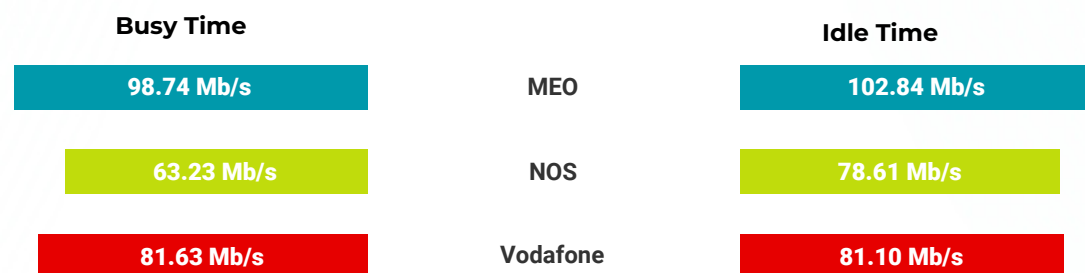
The subscribers of MEO enjoyed the best average broadband upload speed in 2023.

Upload Speed results ventilation (average)



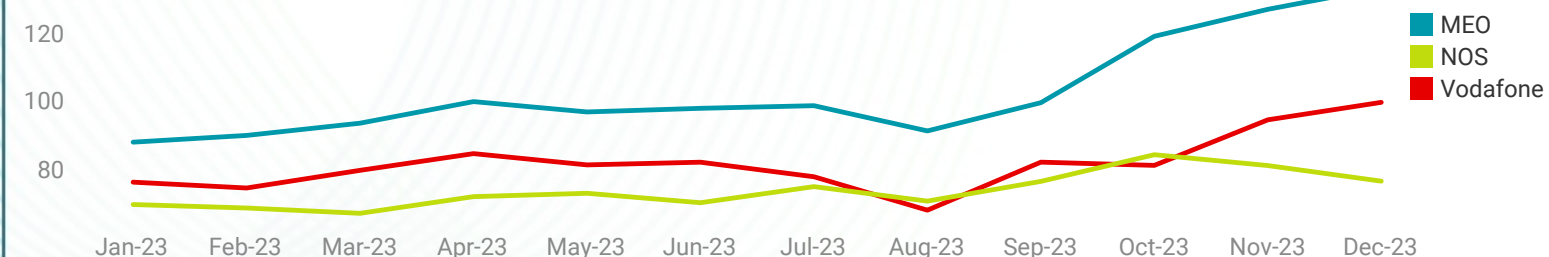
Source : nperf.com

Upload Speed (average)



Source : nperf.com

Upload Speed evolution over the year (average)



Source : nperf.com



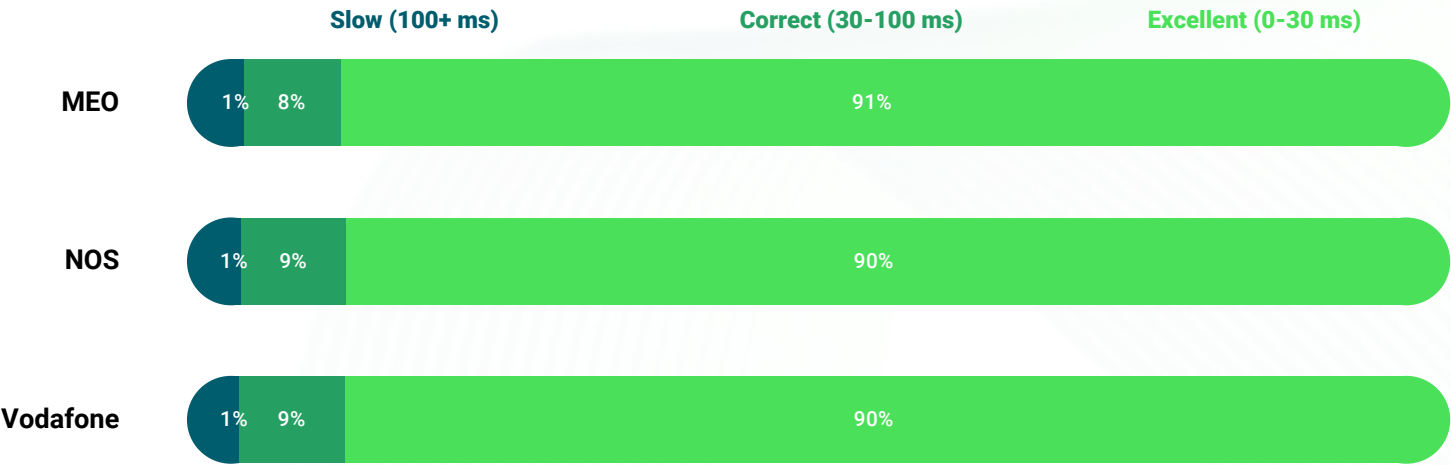
Latency Speed (average)



Source : nperf.com

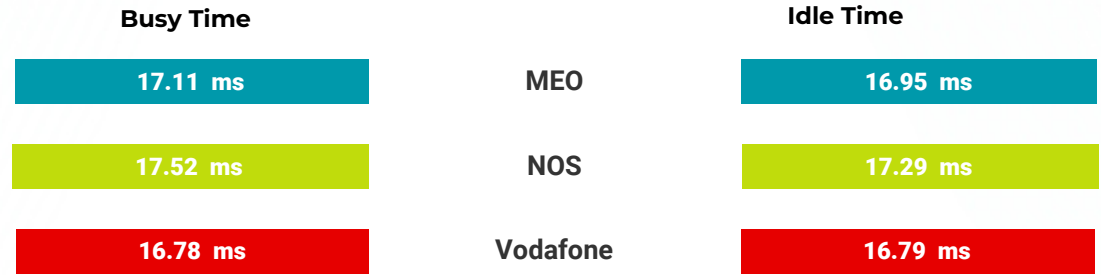
The subscribers of Vodafone and MEO enjoyed the best average broadband latency in 2023.

Latency Speed results ventilation (average)



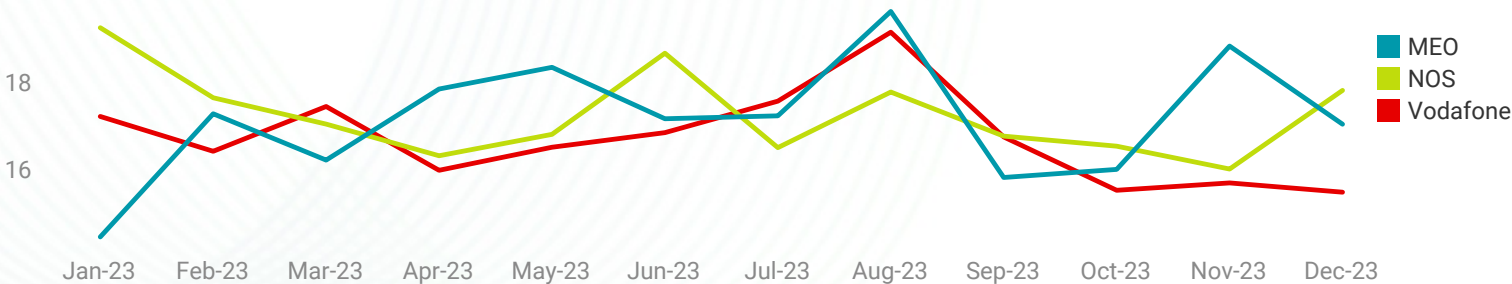
Source : nperf.com

Latency Speed (average)



Source : nperf.com

Average latency Speed evolution over the year



Source : nperf.com

nPerf Score (nPoints)



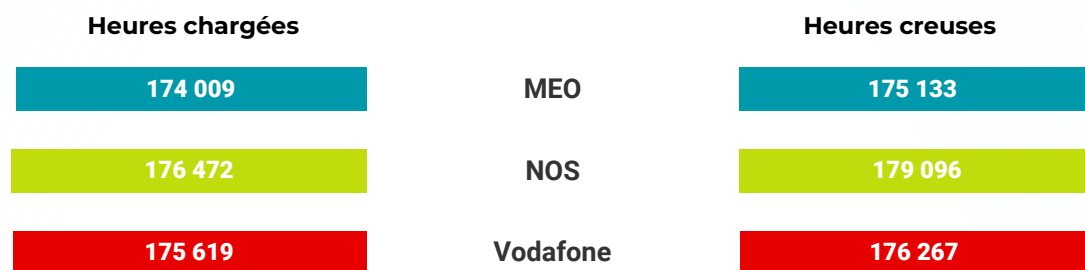
Source : nperf.com

The subscribers of NOS , Vodafone and MEO enjoyed the best broadband performances in Portugal during 2023 on FTTH.

- Best FTTH Internet Performance : NOS (178 302 nPoints), Vodafone (176 032 nPoints) and MEO (174 710 nPoints)
- Best FTTH Download speed : NOS (452.40 Mb/s)
- Best FTTH Upload speed : MEO (168.12 Mb/s)
- Best FTTH Latency speed : NOS (10.86 ms) and Vodafone (11.08 ms)

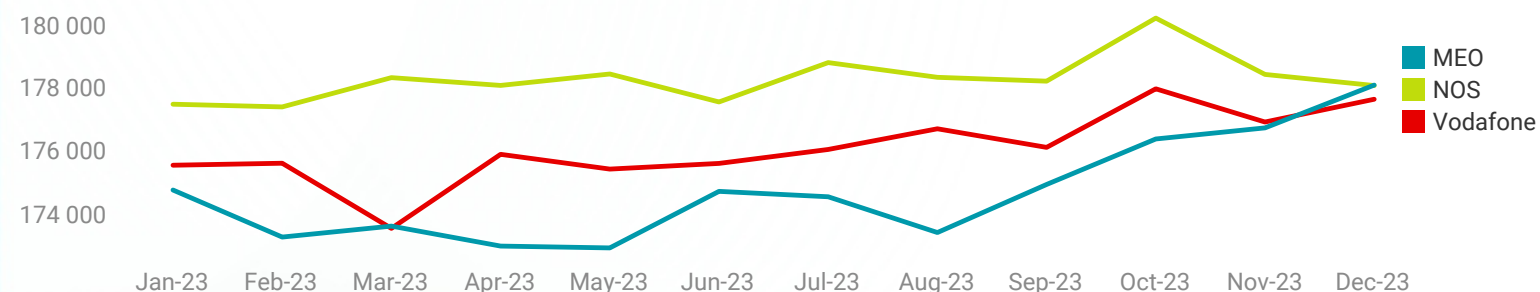
Source : nperf.com

nPerf Score (nPoints)



Source : nperf.com

nPerf score evolution over the year (average)



Source : nperf.com

nPerf Score (nPoints)



Source : nperf.com

The subscribers of MEO , Vodafone and NOS enjoyed the best broadband performances in Portugal during 2023.

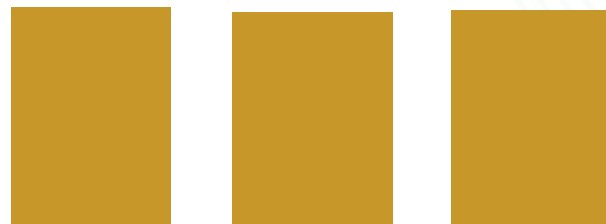
The nperf score takes into account the measured bitrates and the latency. The value of the points for the rates and the latency is calculated on a logarithmic scale, to better represent the perception of the user.

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

Source : nperf.com

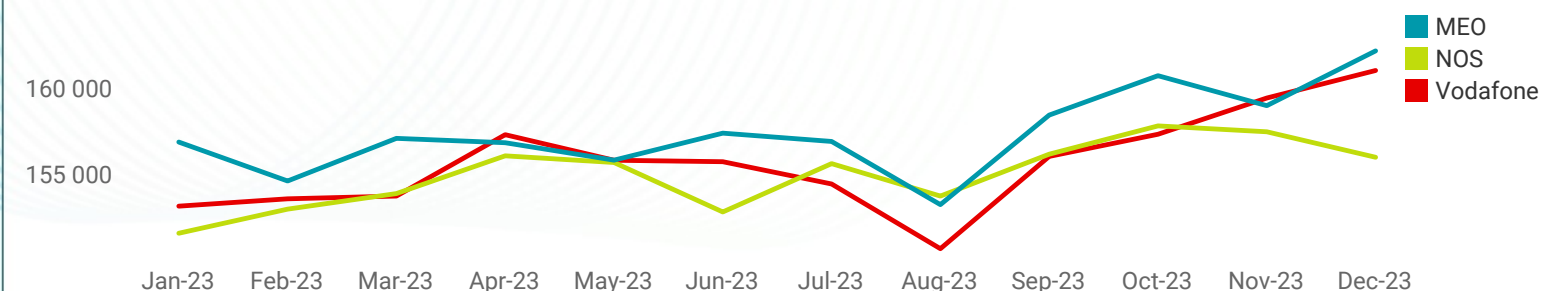


Best fixed Internet performance
in 2023



Source : nperf.com

nPerf score evolution over the year (average)



Source : nperf.com

