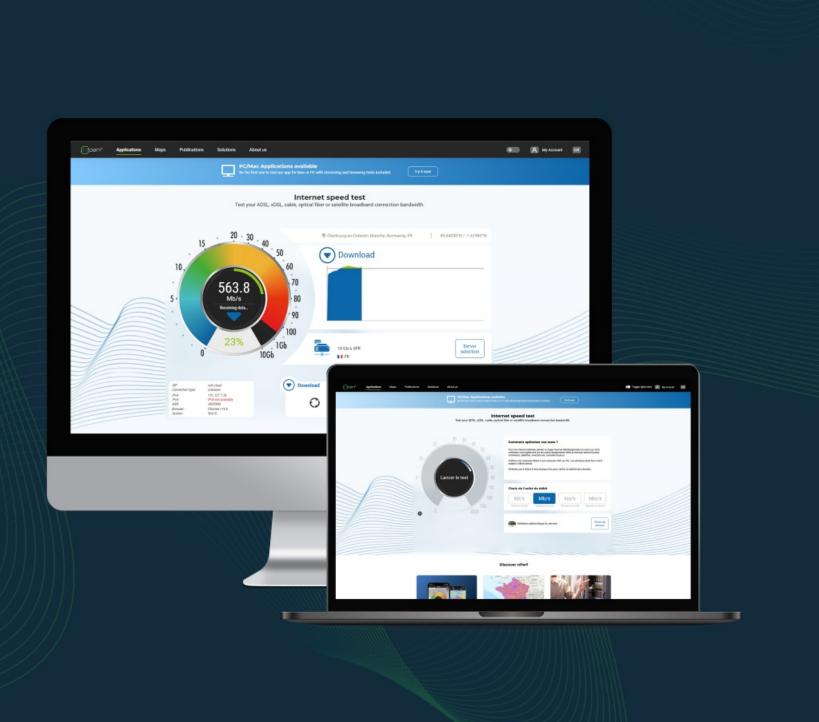


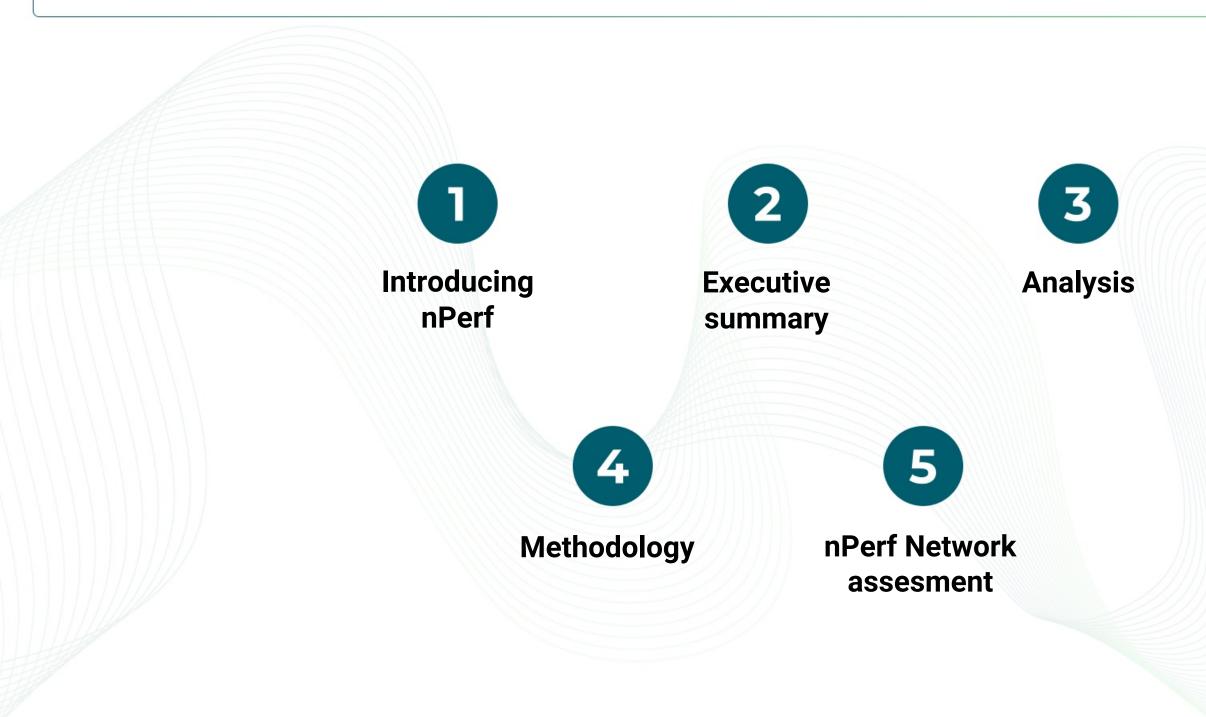
Barometer of fixed Internet Connections in Spain.

01/01/2023 - 31/12/2023





Agenda





n perf

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.





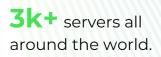


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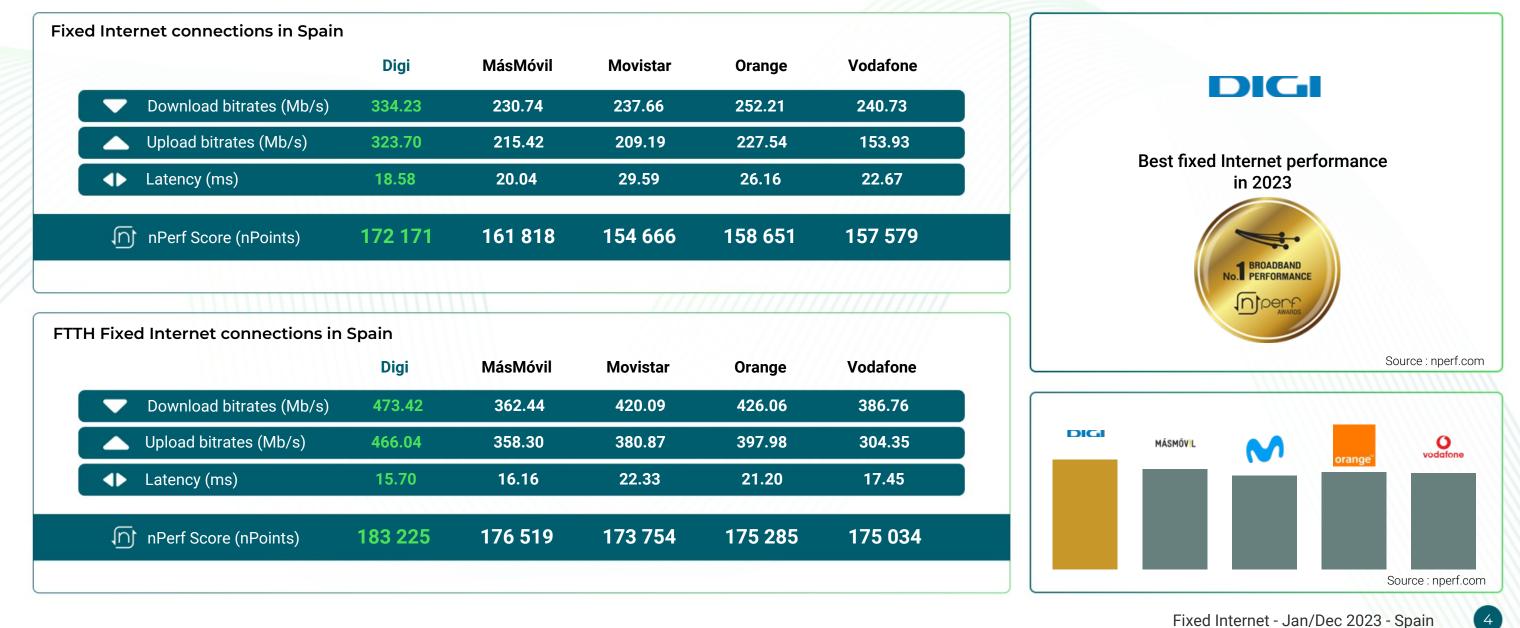




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2. Executive Summary

The subscribers of Digi enjoyed the best broadband performances in Spain during 2023.





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3. Analysis

Spain's fixed broadband market is a battleground of intense competition among leading Internet Service Providers, each vying to offer the pinnacle of performance and service quality. The introduction of FTTH has raised the bar, providing consumers with unmatched speeds and dependability.

Digi: confirms his leadership

Digi shines with its outstanding performance, topping the charts in both download and upload speeds. Digi delivers an average download speed of 334 Mb/s and an upload speed of 324 Mb/s. Its FTTH services amplify these figures to a remarkable 473 Mb/s for downloads and 466 Mb/s for uploads. With a low latency of 19 ms for its overall offerings and an even more impressive 16 ms for FTTH, coupled with high nPerf scores of 172,000 and 183,000 respectively, Digi secures its position as the premier choice for those seeking the fastest and most responsive internet service.

MásMóvil: the formidable contender

MásMóvil emerges as a robust competitor with strong performance across the spectrum. Its total service boasts a download speed of 231 Mb/s and an upload speed of 215 Mb/s, while its FTTH service sees these increase to 362 Mb/s and 358 Mb/s respectively. With a latency of 20 ms in the general category and a reduced 16 ms in FTTH, along with nPerf scores of 162,000 and 177,000, MásMóvil proves to be a dependable choice for those who value a blend of speed and quality.

Orange: a sturdy competitor

Orange demonstrates solid performance with download speeds of 252 Mb/s and upload speeds of 228 Mb/s in the general category, significantly improving to 426 Mb/s and 398 Mb/s in its FTTH offerings. Despite a latency of 26 ms in general and 21 ms in FTTH, Orange's nPerf scores of 159,000 and 175,000 show its capability to provide high-quality service that meets the needs of a wide range of users.

Vodafone: the versatile connectivity champion

In 4rth position, Vodafone presents a well-rounded experience with download speeds of 241 Mb/s and upload speeds of 154 Mb/s in its total service, enhanced to 387 Mb/s and 304 Mb/s in FTTH. Its latency is 23 ms for the general service and improves to 17 ms for FTTH, with nPerf scores of 158,000 and 175,000 respectively, making Vodafone a versatile choice for users with varied internet requirements.

Movistar: the veteran

Holding the last position of our research, Movistar offers commendable speeds of 238 Mb/s for downloads and 209 Mb/s for uploads in its overall service. Its FTTH service boosts these to 420 Mb/ s for downloads and 381 Mb/s for uploads. Despite a higher latency of 30 ms for its general service and 22 ms for FTTH, Movistar's nPerf scores of 155,000 and 174,000 reflect its dedication to maintaining a solid market stance.

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.

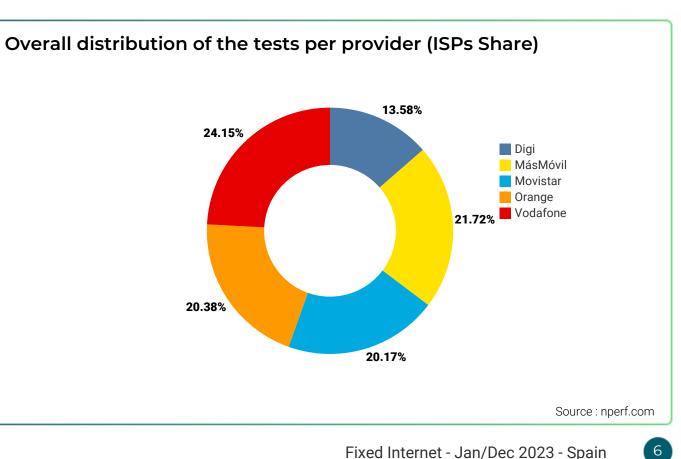
Latency (ping) :

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 1 % precision for absolute values and 0.5 point for percentage-based results, highlighting the reliability and accuracy of our data.

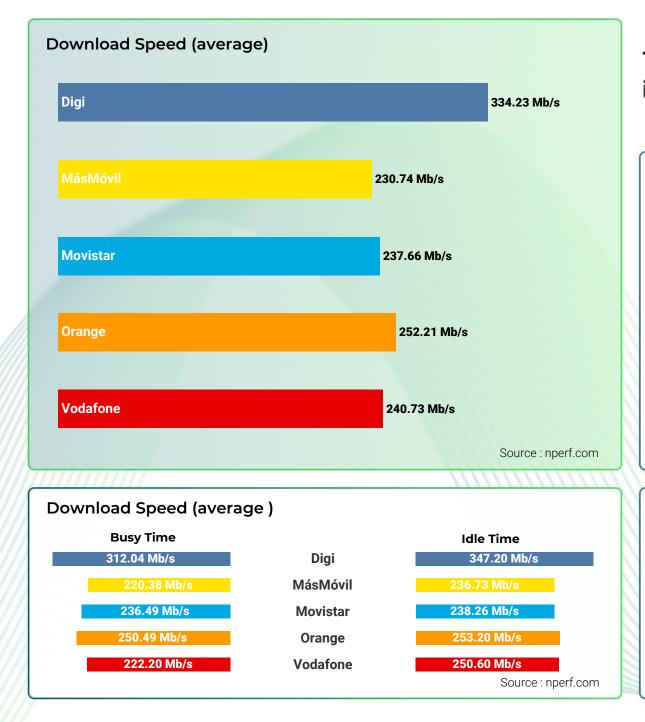
For a more comprehensive understanding of the user experience, our report features test results during both Busy hours (6 PM to 11 PM) and Idle hours (the rest of the day). Busy hours, marked by network strain, can impact user experience through congestion. This approach helps in understanding how network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

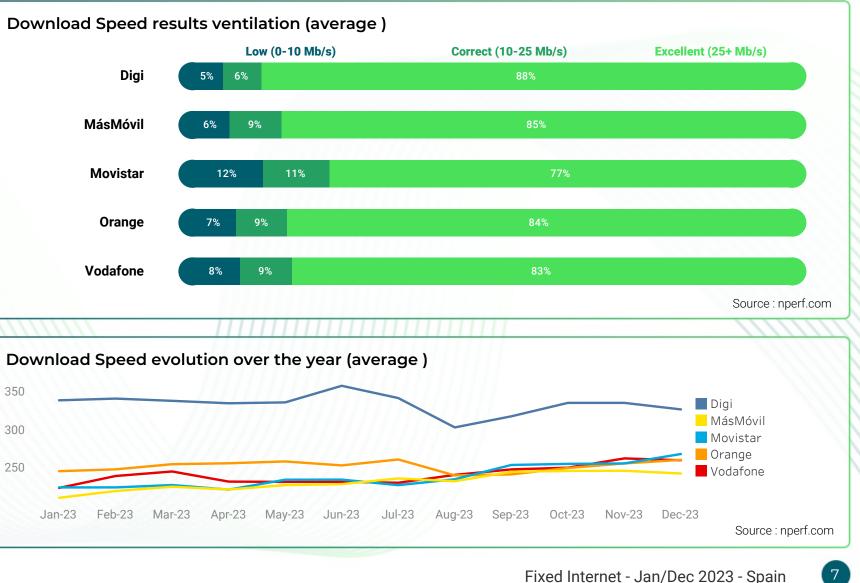






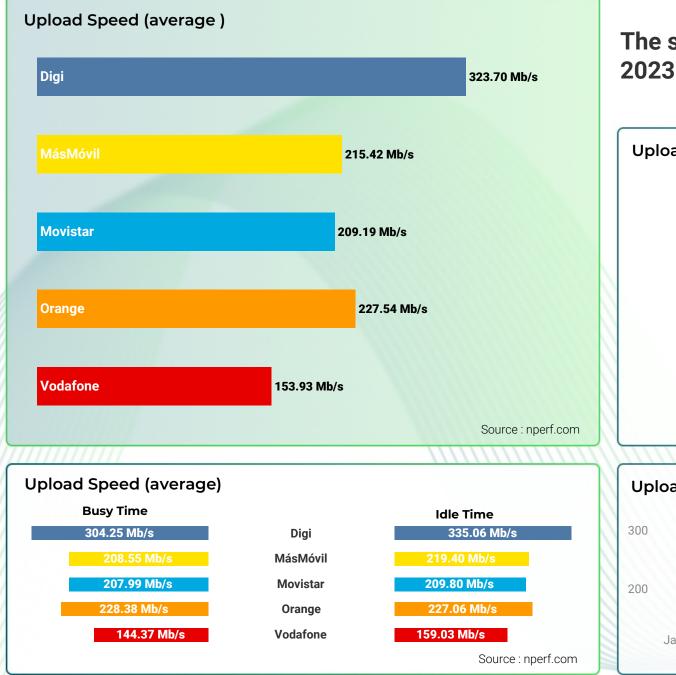


The subscribers of Digi enjoyed the best average broadband download speed in 2023.

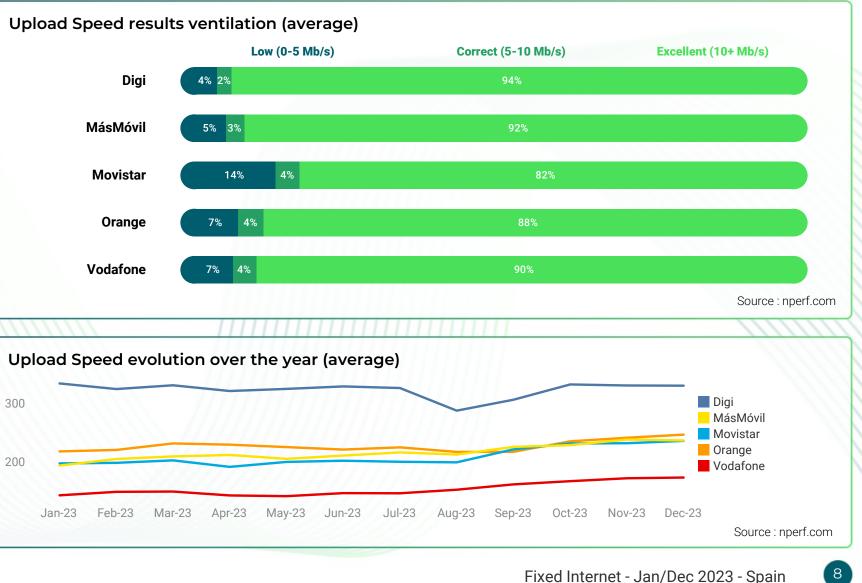






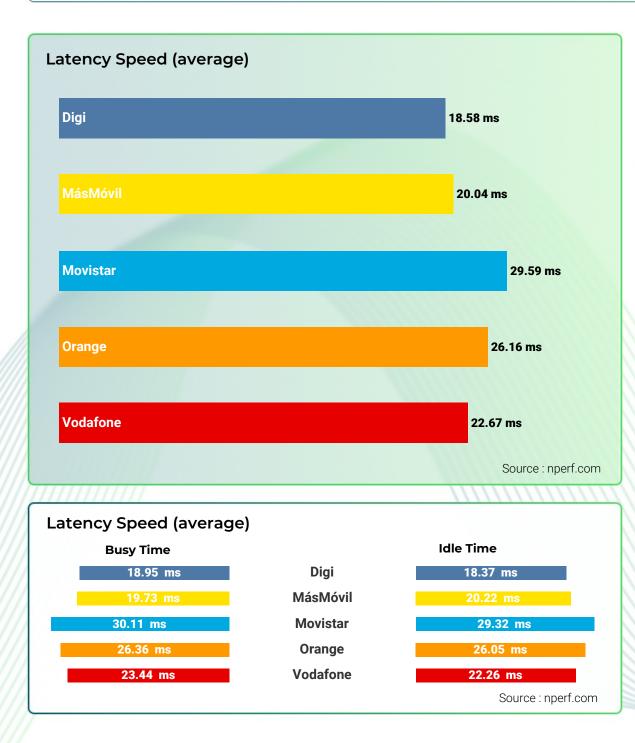


The subscribers of Digi enjoyed the best average broadband upload speed in 2023.

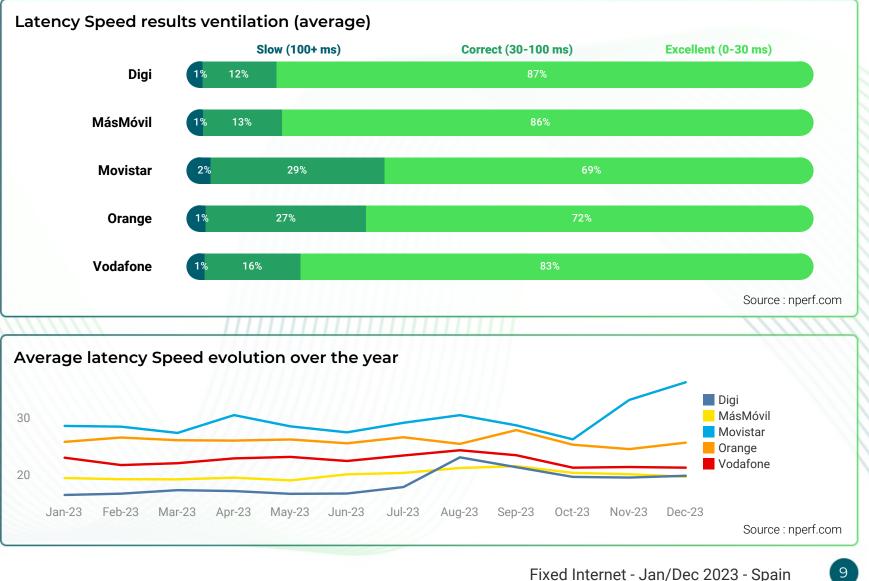






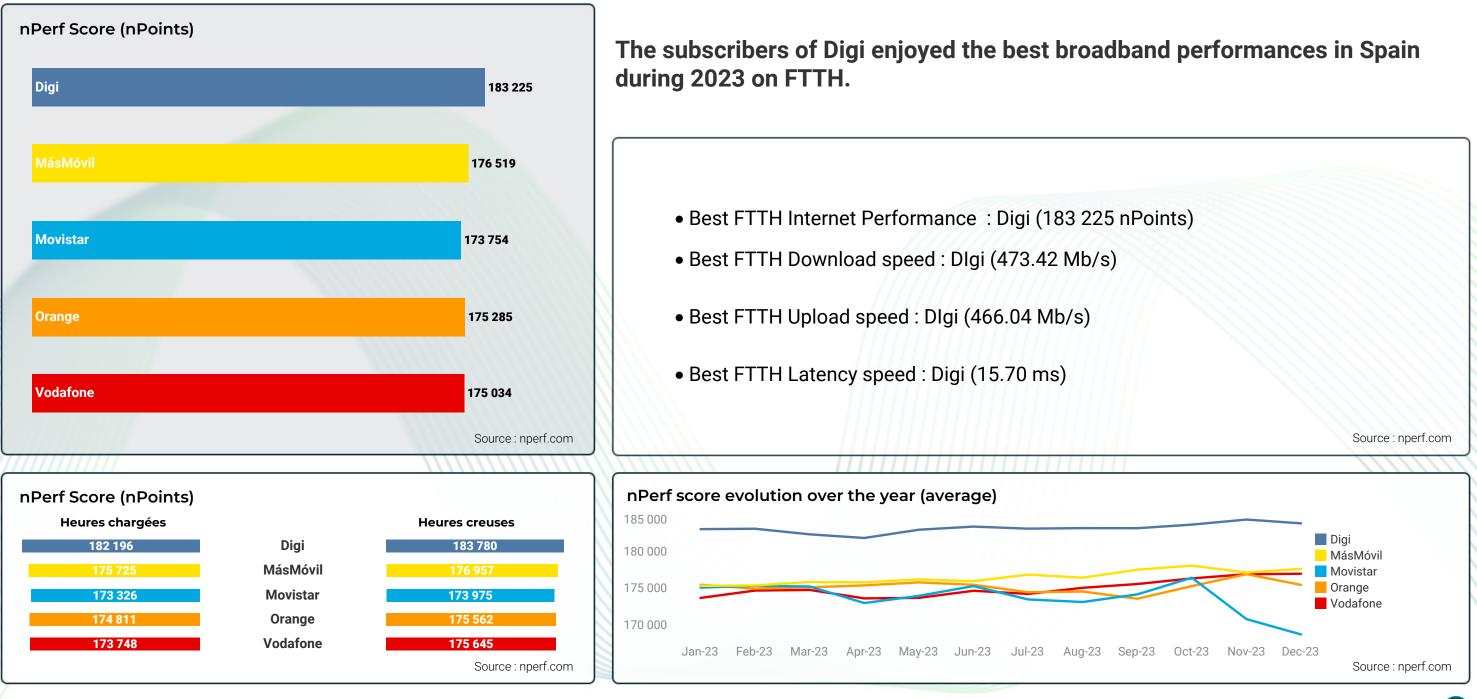


The subscribers of Digi enjoyed the best average broadband latency in 2023.





Fixed Internet performance FTTH

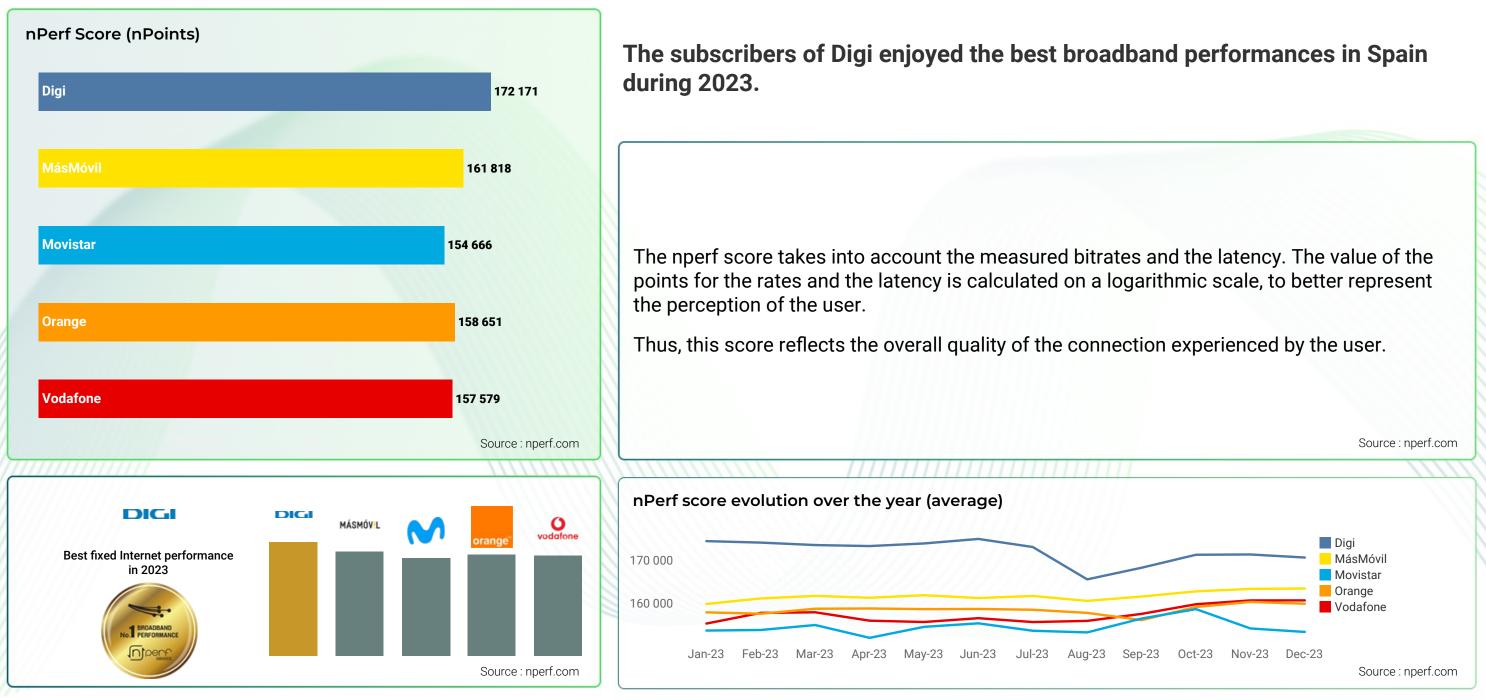




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Fixed Internet performance in Spain





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