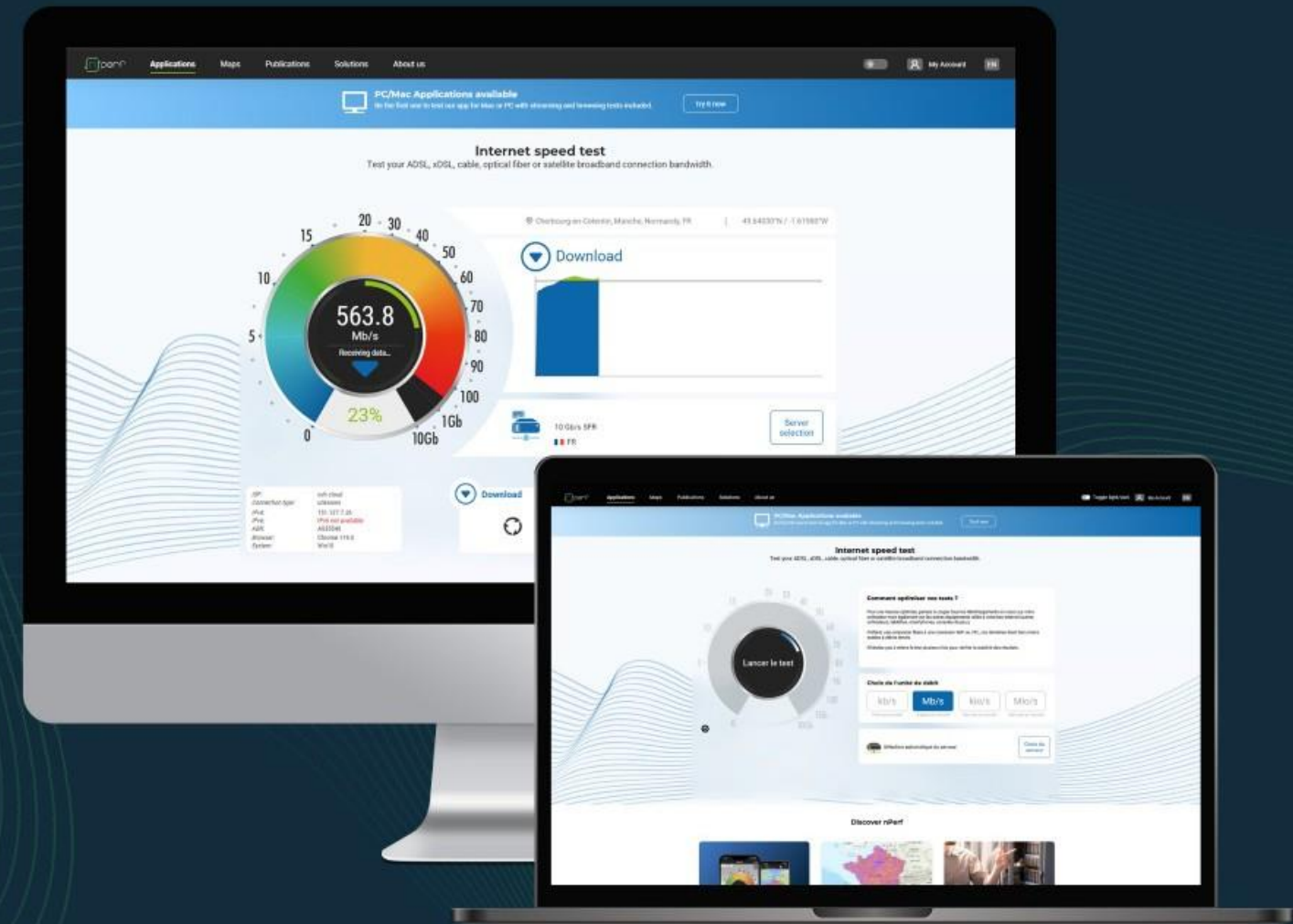# Barometer of fixed Internet connections in Brazil

01/07/2023 - 30/06/2024

1 Introducing nPerf

2 Executive summary

3 Analysis

4 Methodology

5 nPerf Network assesment

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.
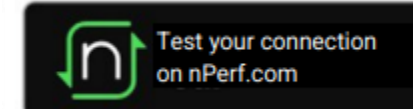
300k+ tests daily worldwide.

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! Dowload our app or visit our website!

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Test your connection on nPerf.com

The subscribers of Vivo enjoyed the best fixed Internet performances in Brazil during 2024.

Fixed Internet connections in Brazil

	Claro	Oi	Vivo
Download speeds (Mb/s)	391.89	333.33	337.15
Upload speeds (Mb/s)	198.29	225.33	204.62
Latency (ms)	23.46	30.09	13.41
Web browsing (%)	63.73	63.17	66.35
YouTube streaming (%)	91.15	91.13	93.03
nPerf Score (nPoints)	129 012	123 635	138 324

Source : nperf.com

vivo

Best fixed Internet performance in 2024

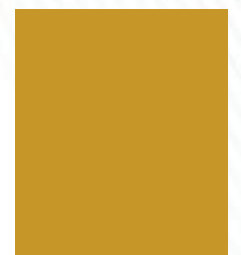No.1 BROADBAND PERFORMANCE — nperf AWARDS

Source : nperf.com

Claro — oi — vivo

Source : nperf.com

Introduction

In the competitive Brazilian telecom market, Vivo has emerged as the leader, followed by Claro in second place and Oi in third. Each company excels in different areas of performance.

Vivo leading the market

Vivo stands out as the leader in Brazil, particularly excelling in both latency and overall user experience. The company boasts an impressive latency score of just 13 ms, making it the top performer in this category. Additionally, Vivo has achieved strong results with a 93% score in streaming and 66% in browsing, underscoring its ability to deliver a smooth and reliable online experience. Vivo also offers a highly efficient network, with download speeds exceeding 330 Mb/s and upload speeds over 200 Mb/s, providing more than enough capacity for multiple simultaneous internet uses.

Claro dominating in download speed

Claro secures the second position, distinguishing itself as the uncontested leader in download speeds. With an outstanding score of 392 Mb/s in this category, Claro provides exceptional data download capabilities, making it a preferred choice for users who prioritize fast Internet connections for downloading large files and media content.

Oi strong in upload speed

Oi holds the third position in the market, emerging as a solid leader in upload speed. The company has achieved a score of 225 Mb/s in this area, demonstrating its strength in providing reliable and efficient data upload services, which are crucial for users who frequently share large files, engage in video conferencing, or upload content online.

Conclusion

Vivo leads the Brazilian telecom market with its superior latency and user experience, while Claro excels in download speed, and Oi stands out for its strong upload speed performance. Each provider has its strengths, making the market highly competitive and ensuring that consumers have access to high-quality Internet services across different performance metrics.

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.

 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 0.3% precision for absolute values, 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.
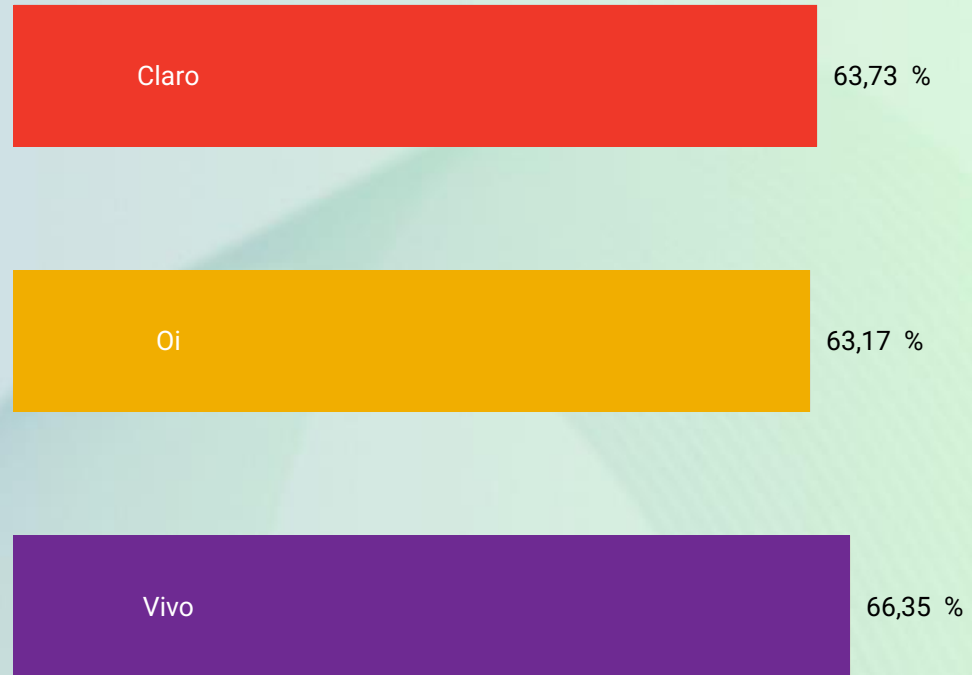
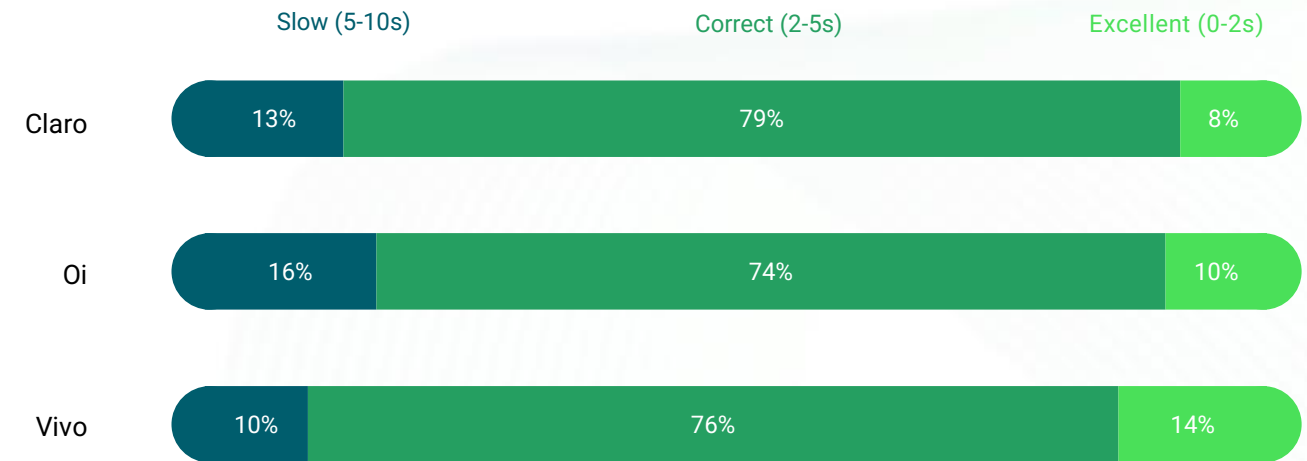**Overall distribution of the tests per provider (ISPs Share)**
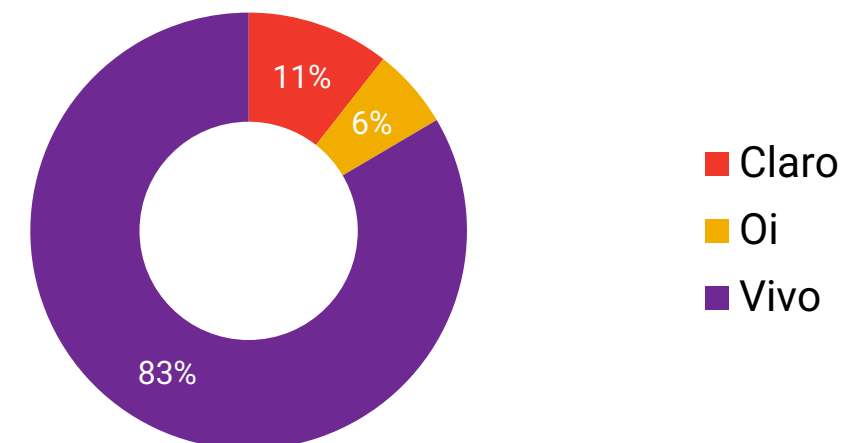
- 🟥 Claro — 11%
- 🟨 Oi — 6%
- 🟪 Vivo — 83%

Source : nperf.com

Browsing Performance rate (average)

Claro	63,73 %
Oi	63,17 %
Vivo	66,35 %

Source : nperf.com

The subscribers of **Vivo** enjoyed the best mobile Internet browsing performance in 2024.

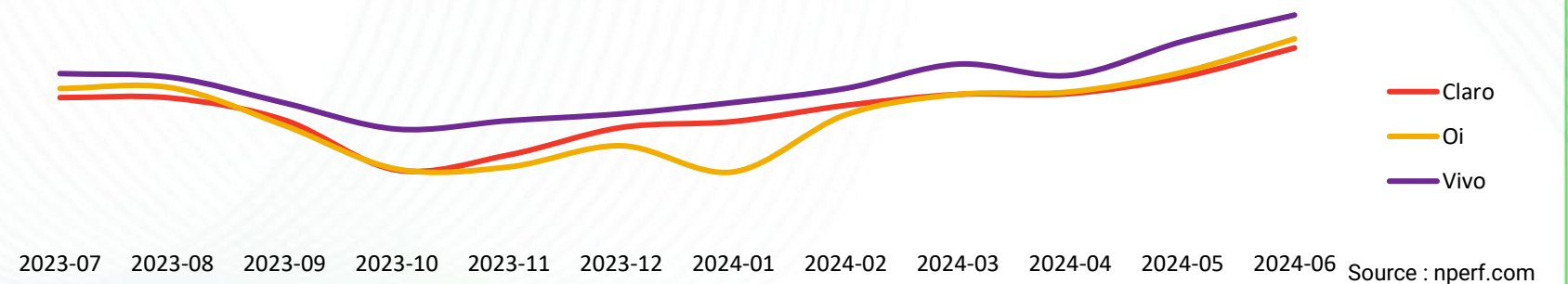## Browsing Performance results ventilation (average)

Slow (5-10s)   Correct (2-5s)   Excellent (0-2s)

	Slow (5-10s)	Correct (2-5s)	Excellent (0-2s)
Claro	13%	79%	8%
Oi	16%	74%	10%
Vivo	10%	76%	14%

Source : nperf.com

Browsing Performance rate (average)

Busy Time		Idle Time
63,89 %	Claro	63,67 %
62,31 %	Oi	63,50 %
67,01 %	Vivo	66,13 %

Source : nperf.com

Browsing performance rate (average) evolution over the year

— Claro
— Oi
— Vivo

2023-07 2023-08 2023-09 2023-10 2023-11 2023-12 2024-01 2024-02 2024-03 2024-04 2024-05 2024-06

Source : nperf.com

Quality of Experience: Streaming

Streaming Performance rate (average)

Claro	91,15 %
Oi	91,13 %
Vivo	93,03 %
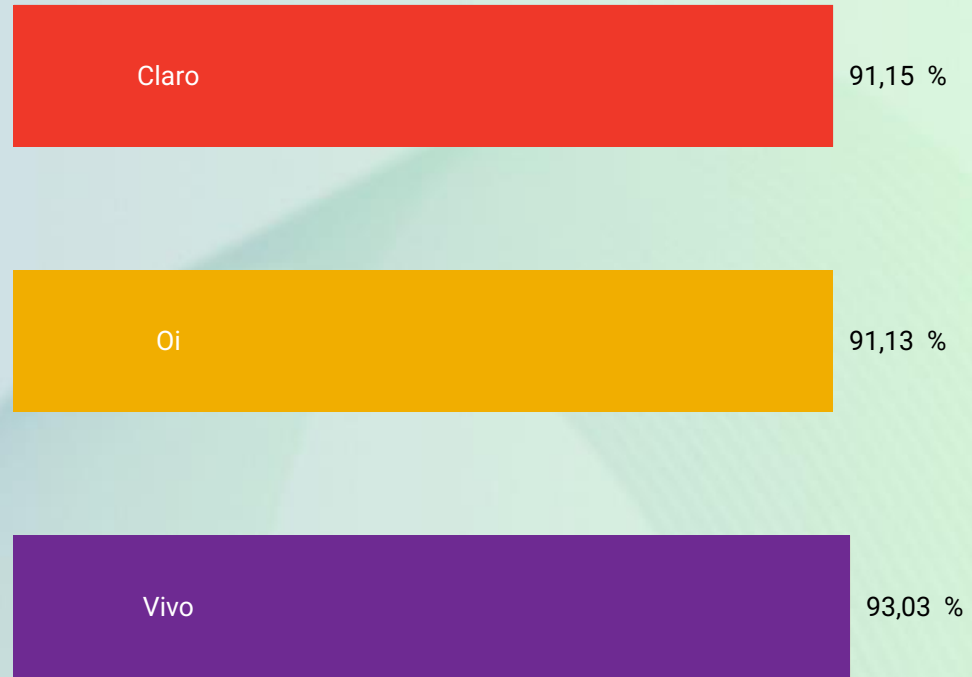
Source : nperf.com

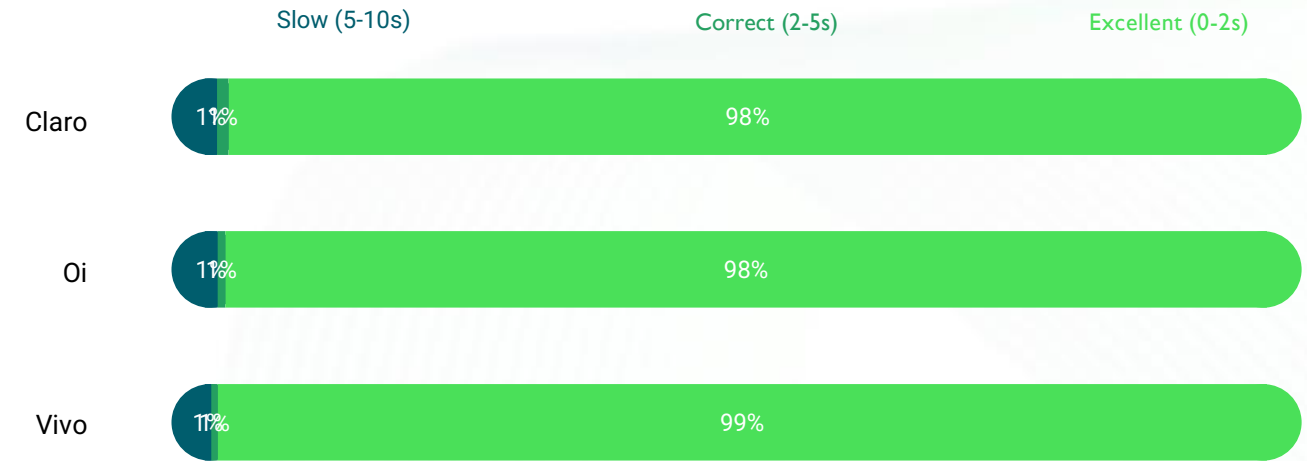The subscribers of **Vivo** enjoyed the best mobile Internet streaming performance in 2024.
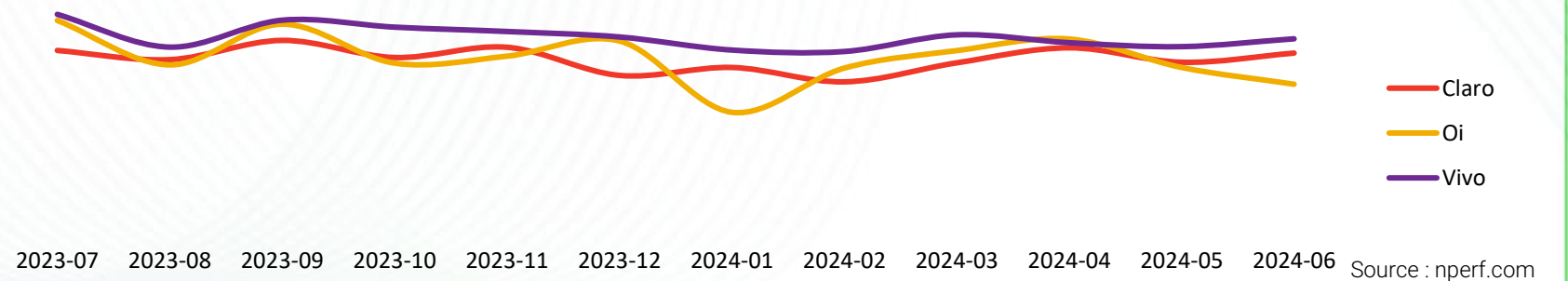
Streaming Performance results ventilation (average)

Slow (5-10s) Correct (2-5s) Excellent (0-2s)

	Slow	Correct/Excellent
Claro	1%	98%
Oi	1%	98%
Vivo	1%	99%

Source : nperf.com

Streaming Performance rate (average)

Busy Time		Idle Time
91,01 %	Claro	91,22 %
91,11 %	Oi	91,14 %
93,13 %	Vivo	92,99 %

Source : nperf.com

Streaming performance rate (average) evolution over the year

2023-07 2023-08 2023-09 2023-10 2023-11 2023-12 2024-01 2024-02 2024-03 2024-04 2024-05 2024-06

— Claro
— Oi
— Vivo

Source : nperf.com

Speed: Download

Download Speed (average)

- **Claro**: 391,89 Mb/s
- **Oi**: 333,33 Mb/s
- **Vivo**: 337,15 Mb/s
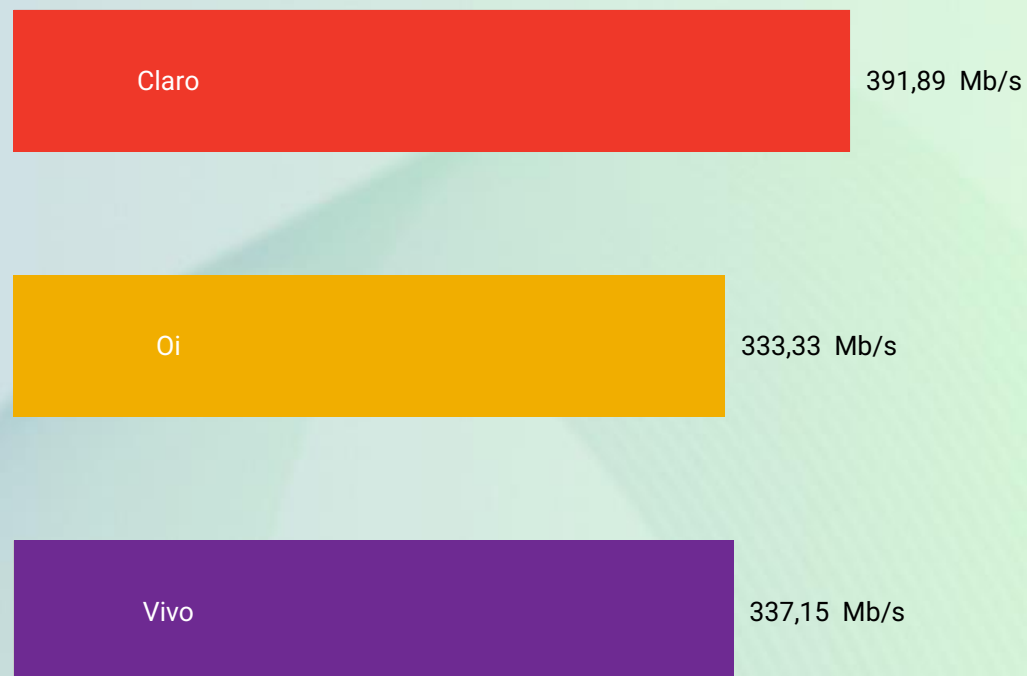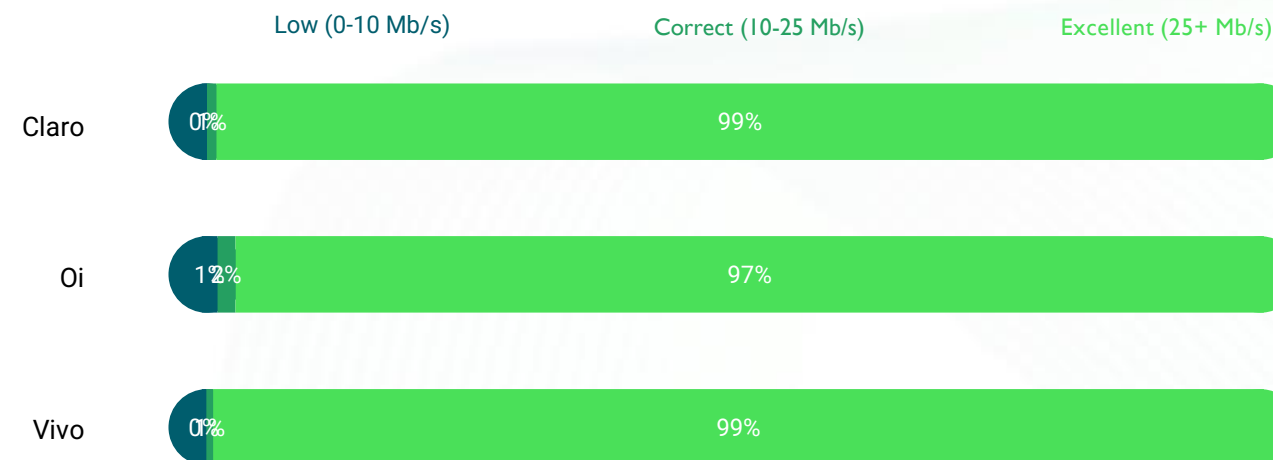
Source : nperf.com

The subscribers of **Claro** enjoyed the best average mobile Internet download speed in 2024.
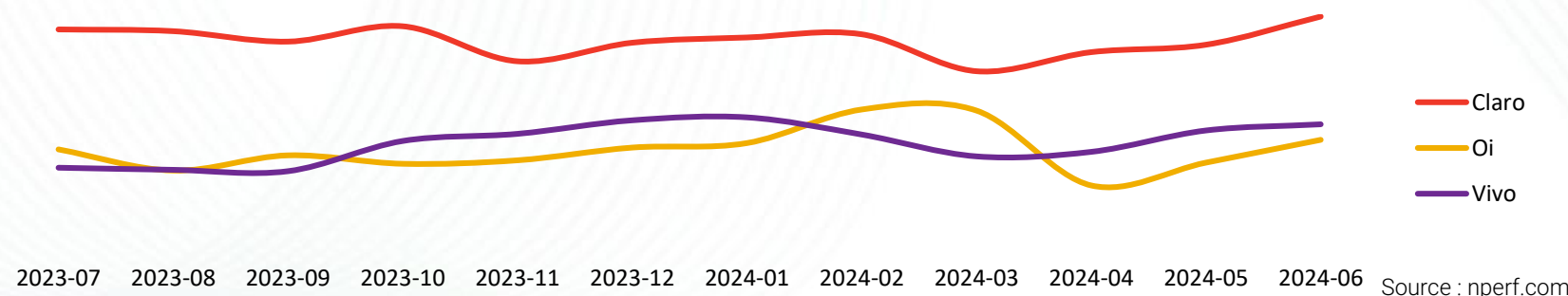
Download Speed results ventilation (average)

Low (0-10 Mb/s) Correct (10-25 Mb/s) Excellent (25+ Mb/s)

	Low (0-10 Mb/s)	Correct (10-25 Mb/s)	Excellent (25+ Mb/s)
Claro	0%	1%	99%
Oi	1%	2%	97%
Vivo	0%	1%	99%

Source : nperf.com

Download Speed (average)

	Busy Time		Idle Time
Claro	387,51 Mb/s		393,37 Mb/s
Oi	317,05 Mb/s		339,86 Mb/s
Vivo	328,49 Mb/s		338,47 Mb/s

Source : nperf.com

Download Speed evolution over the year (average)

Legend: Claro, Oi, Vivo

2023-07 2023-08 2023-09 2023-10 2023-11 2023-12 2024-01 2024-02 2024-03 2024-04 2024-05 2024-06

Source : nperf.com

Upload Speed (average)

Claro — 198,29 Mb/s

Oi — 225,33 Mb/s

Vivo — 204,62 Mb/s
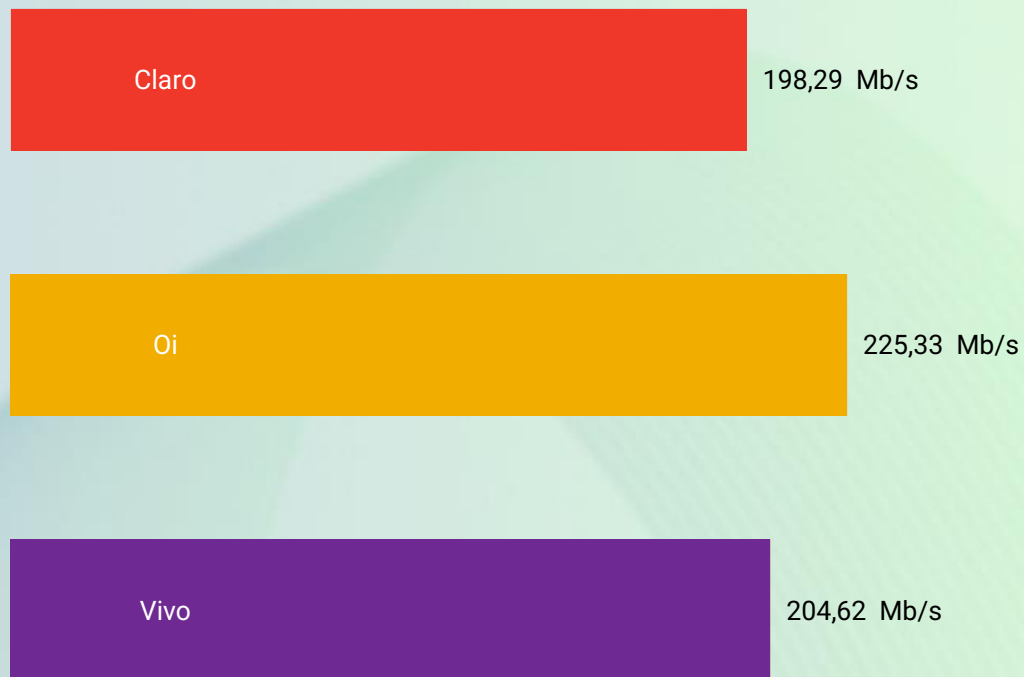
Source : nperf.com

The subscribers of **Oi** enjoyed the best average mobile Internet upload speed in 2024.

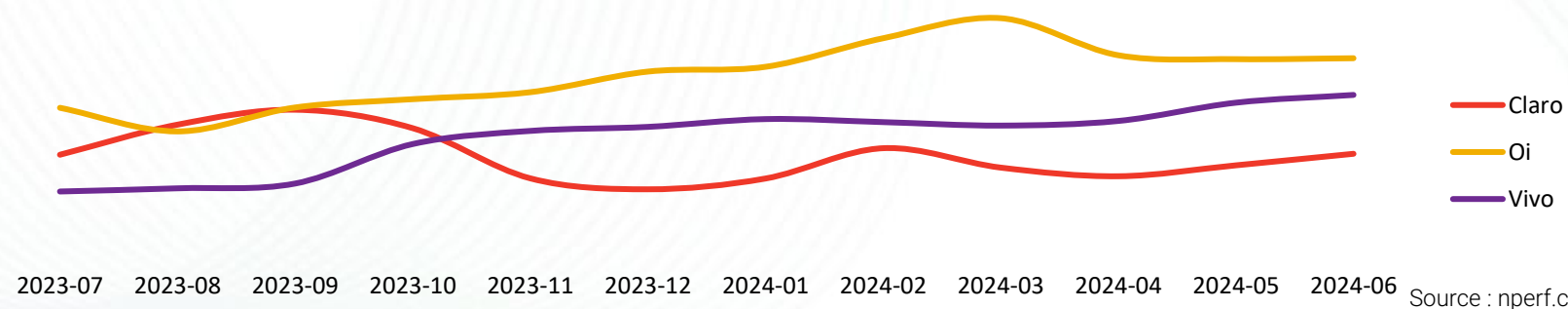## Upload Speed results ventilation (average)

Low (0-5 Mb/s) Correct (5-10 Mb/s) Excellent (10+ Mb/s)

Claro — 0% — 100%

Oi — 0% — 100%

Vivo — 0% — 100%

Source : nperf.com

Upload Speed (average)

Busy Time		Idle Time
203,16 Mb/s	Claro	196,63 Mb/s
220,35 Mb/s	Oi	227,32 Mb/s
204,64 Mb/s	Vivo	204,62 Mb/s

Source : nperf.com

Upload Speed evolution over the year (average)

Claro
Oi
Vivo

2023-07 2023-08 2023-09 2023-10 2023-11 2023-12 2024-01 2024-02 2024-03 2024-04 2024-05 2024-06

Source : nperf.com

Speed: Latency

Latency Speed (average)

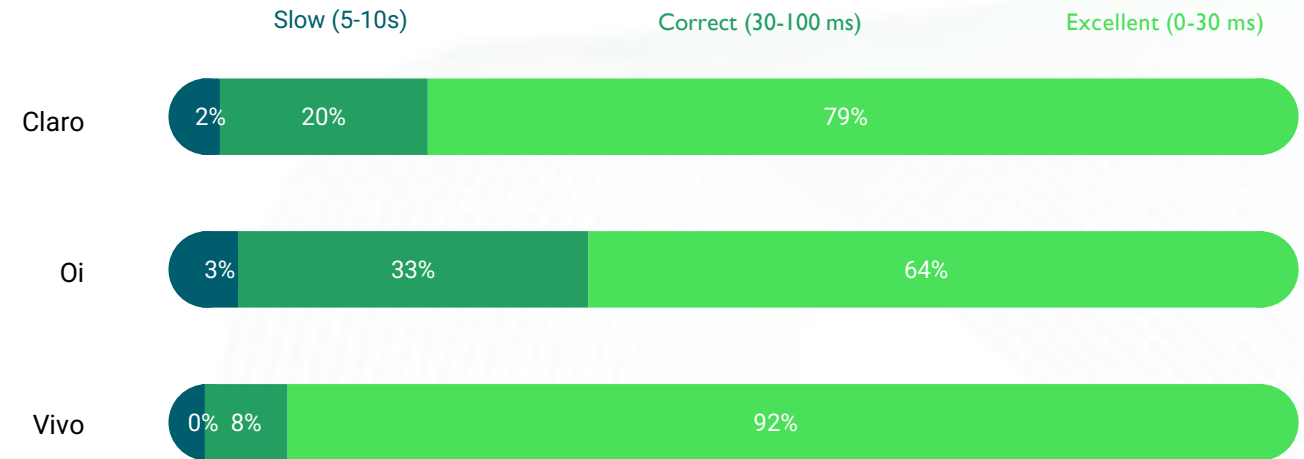| Operator	Latency
Claro	23,46 ms
Oi	30,09 ms
Vivo	13,41 ms
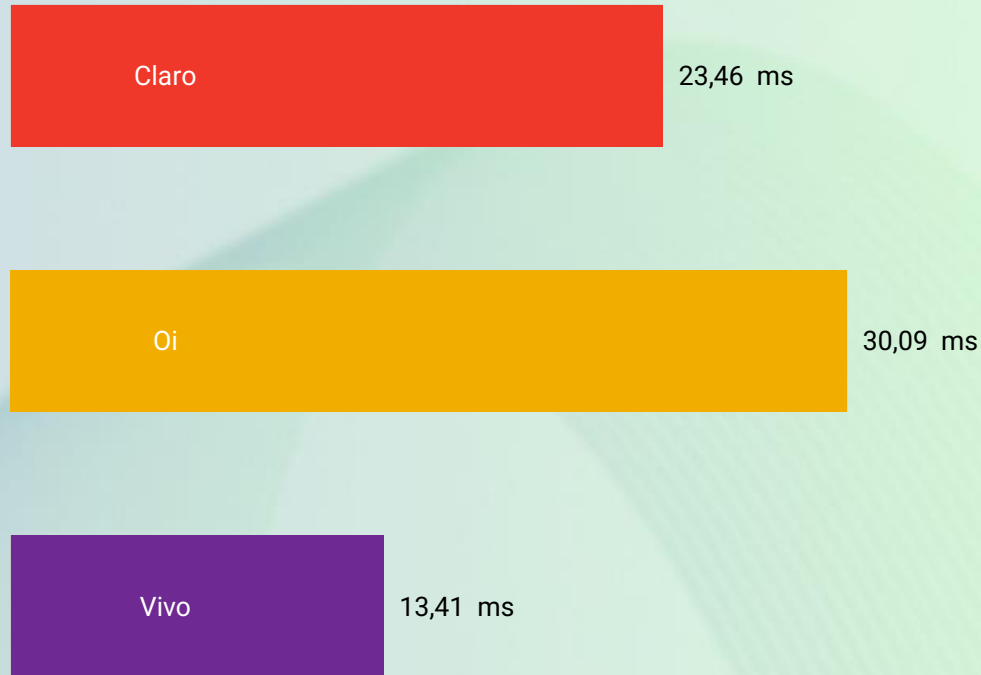
Source : nperf.com

The subscribers of **Vivo** enjoyed the best average mobile Internet latency speed in 2024.

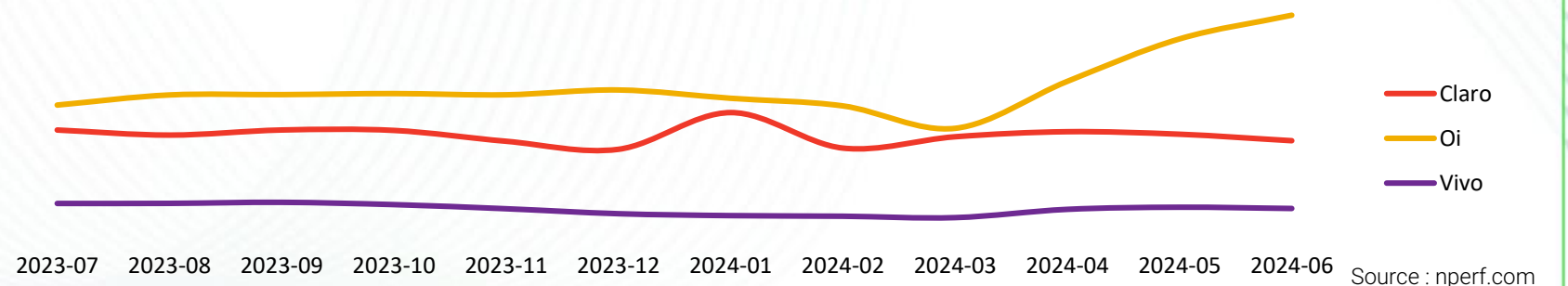## Latency Speed results ventilation (average)

Slow (5-10s)   Correct (30-100 ms)   Excellent (0-30 ms)

Operator	Slow	Correct	Excellent
Claro	2%	20%	79%
Oi	3%	33%	64%
Vivo	0%	8%	92%

Source : nperf.com

Latency Speed (average)

Busy Time	Operator	Idle Time
23,90 ms	Claro	23,32 ms
31,86 ms	Oi	29,39 ms
14,29 ms	Vivo	13,28 ms

Source : nperf.com

Latency Speed evolution over the year (average)

Legend: Claro, Oi, Vivo

2023-07 2023-08 2023-09 2023-10 2023-11 2023-12 2024-01 2024-02 2024-03 2024-04 2024-05 2024-06

Source : nperf.com

Best fixed Internet performance in Brazil

nPerf Score (nPoints)

Claro — 129 012
Oi — 123 635
Vivo — 138 324

Source : nperf.com

The subscribers of Vivo enjoyed the best fixed Internet performances in Brazil during 2024.
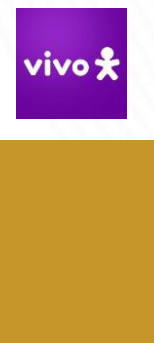
The nPerf score takes into account the measured bitrates, the latency and the QoE tests.

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.

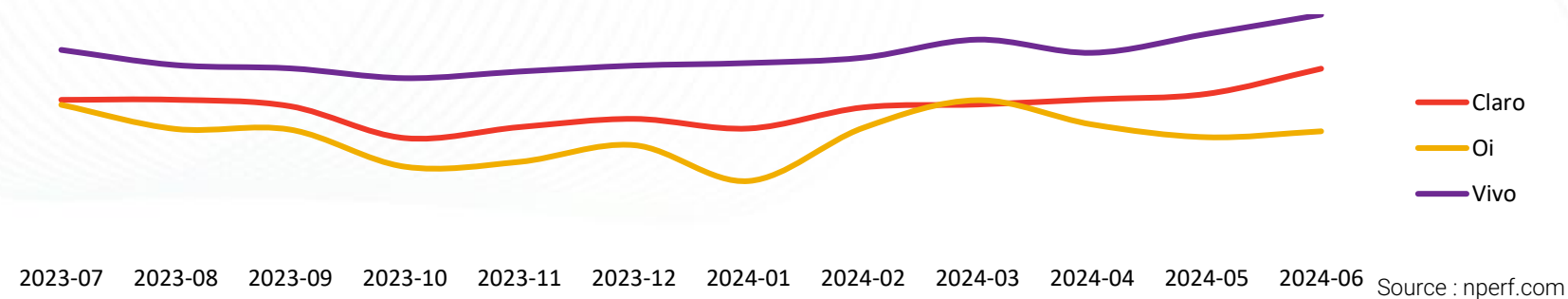Thus, this score reflects the overall quality of the connection experienced by the user.

Source : nperf.com

vivo

Best fixed Internet performance in 2024

No.1 BROADBAND PERFORMANCE

Claro Oi vivo

Source : nperf.com

nPerf score evolution over the year (average)

- Claro
- Oi
- Vivo

2023-07 2023-08 2023-09 2023-10 2023-11 2023-12 2024-01 2024-02 2024-03 2024-04 2024-05 2024-06

Source : nperf.com