

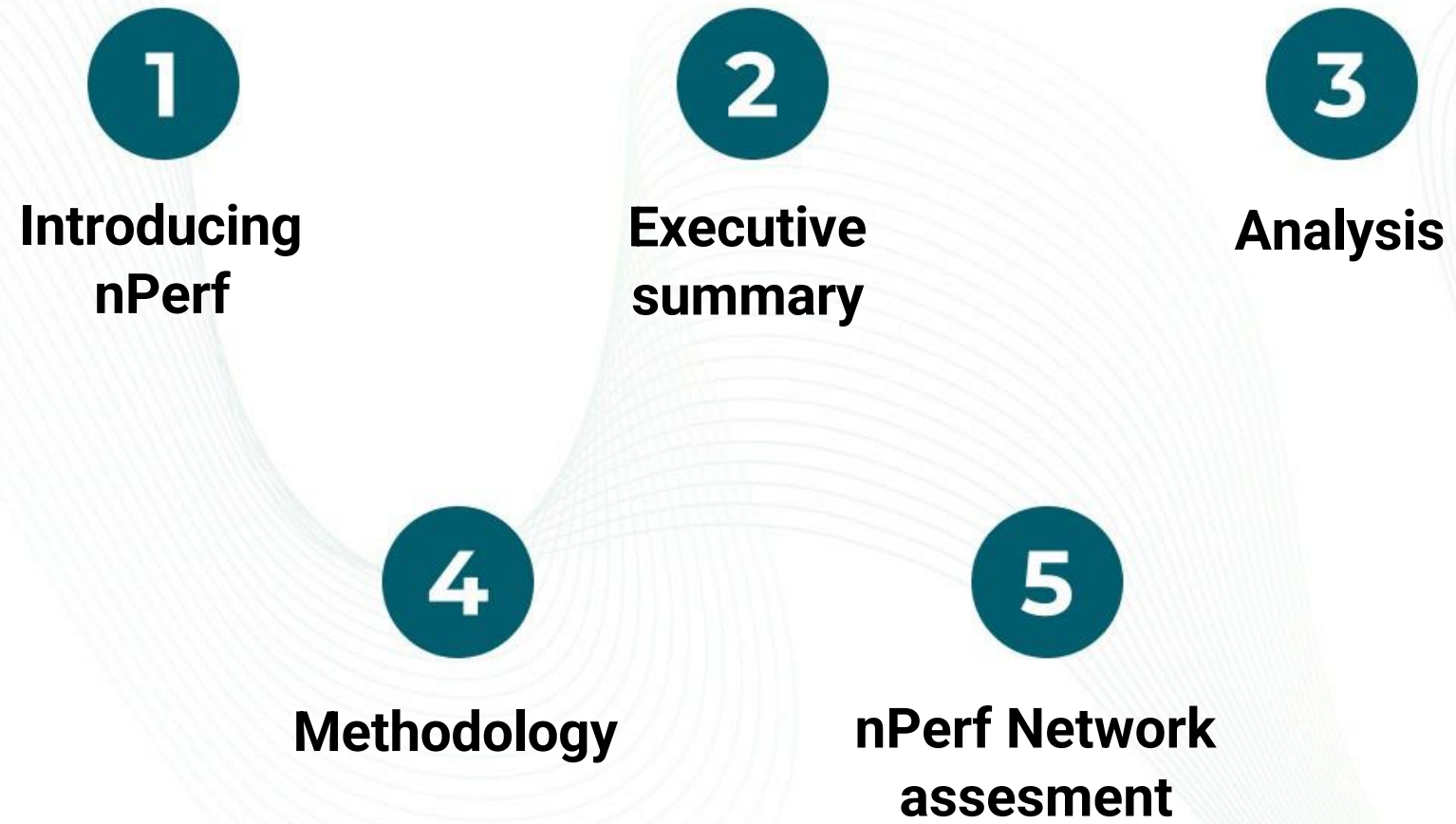
August 19, 2024



# Barometer of mobile Internet connections in Brazil

01/07/2023 - 30/06/2024







## 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.



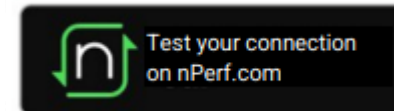
**26Md+** coverage scans in total.



**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 Vivo enjoyed the best mobile Internet performances in Brazil during 2024.

### Mobile Internet connections in Brazil

	Claro	TIM	Vivo
▼ Download speeds (Mb/s)	65.34	74.81	71.67
▲ Upload speeds (Mb/s)	13.12	11.79	13.07
◀▶ Latency (ms)	53.71	57.44	49.13
🌐 Web browsing (%)	42.36	43.17	46.01
🎥 YouTube streaming (%)	80.47	80.17	81.20
nPerf Score (nPoints)	62 701	63 153	66 717

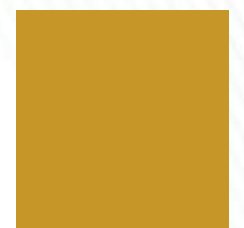
Source : nperf.com



Best mobile Internet performance in 2024



Source : nperf.com



Source : nperf.com

### Introduction

In Brazil's competitive telecom market, Vivo leads the way, followed by TIM in second place and Claro in third. Each provider demonstrates strengths in various aspects of performance, contributing to a dynamic and competitive landscape.

### Vivo undisputed leader

Vivo stands out as the leader of the market, particularly excelling in latency and overall user experience. The company boasts a latency score of 49 ms, making it the top performer in this category. Additionally, Vivo achieves strong scores of 81% in streaming and 46% in browsing, underscoring its ability to deliver a smooth and reliable online experience. Vivo also ranks impressively in upload speed, with a score of 13 Mb/s, placing it co-leader in this category.

### TIM leading the download speed

TIM holds the second position, distinguishing itself as the leader in download speed with an impressive score of 75 Mb/s. TIM also maintains a solid user experience, with scores that closely rival those of Vivo, making it a strong contender in the market.

### Claro strong in upload speed

Claro ranks third overall, but leads in upload speed with a score of 13 Mb/s, matching Vivo's performance in this area. Like TIM, Claro also delivers a solid user experience, positioning itself as a strong competitor close to the market leader, Vivo.

### Conclusion

Vivo leads the Brazilian telecom market with its superior latency and user experience, while TIM excels in download speed, and Claro stands out for its strong upload speed. 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.

## 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:

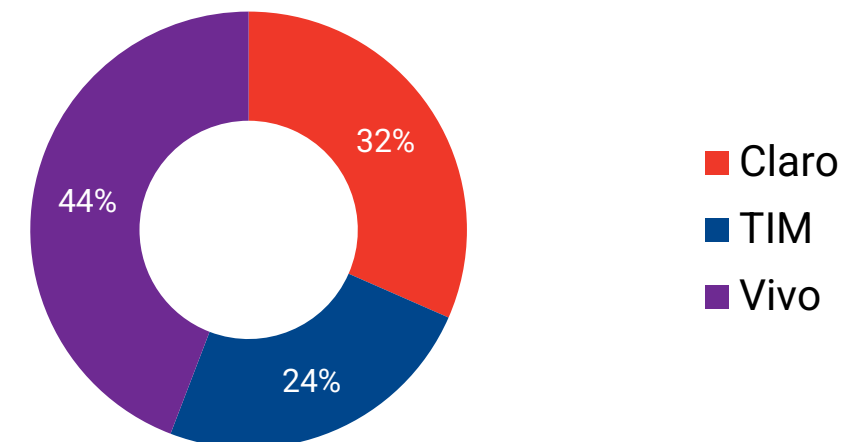
- ▼ **Download bitrate:**  
Indicates the amount of data your connection can receive in one second from the nPerf server. The highest the measured value, the best is the bitrate of your connection.
- ▲ **Upload bitrate:**  
Indicates the amount of data your connection can send in one second from the 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 1.4% 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)



Source : nperf.com



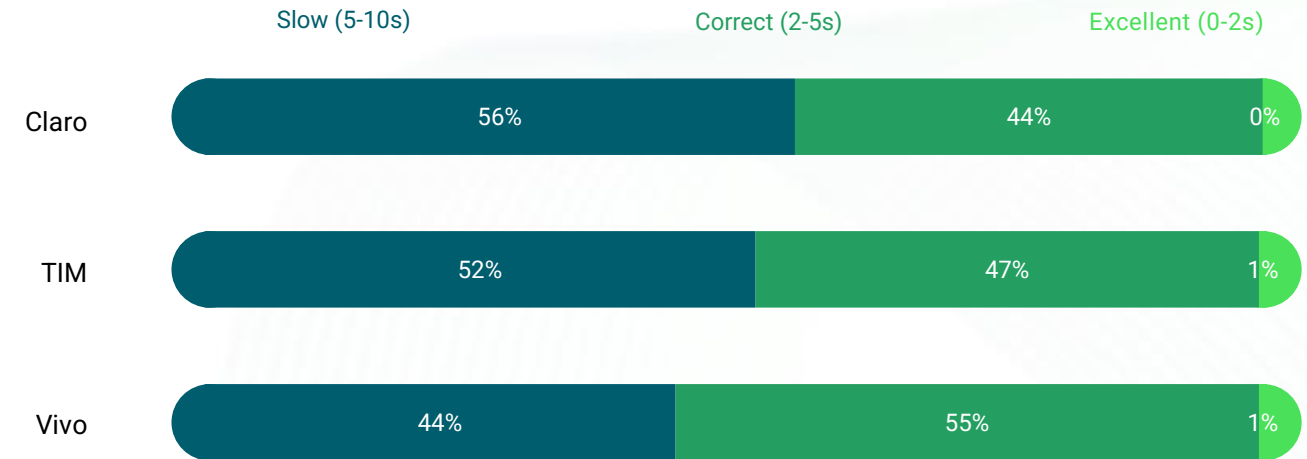
## Browsing Performance rate (average)



Source : nperf.com

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

## Browsing Performance results ventilation (average)



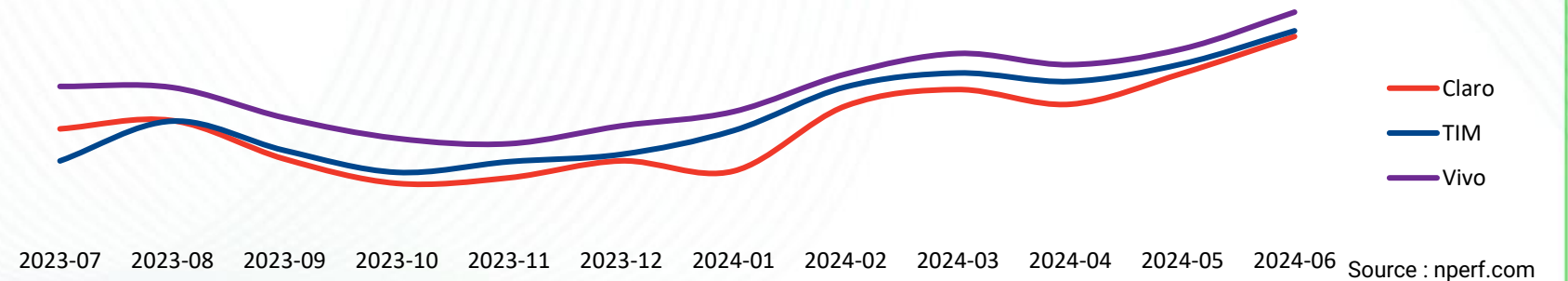
Source : nperf.com

## Browsing Performance rate (average)



Source : nperf.com

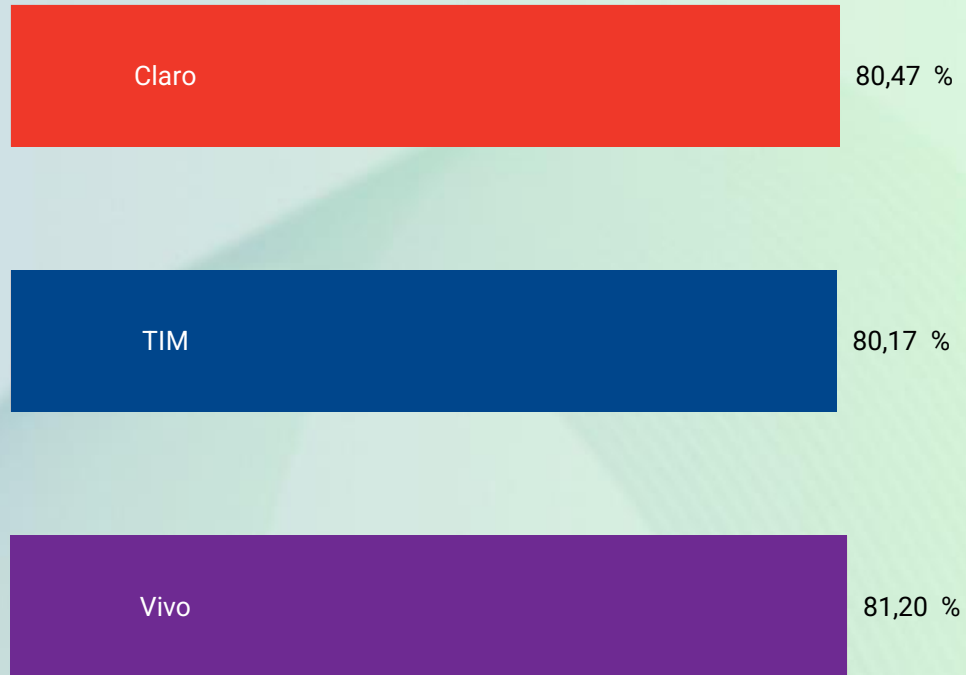
## Browsing performance rate (average) evolution over the year



Source : nperf.com



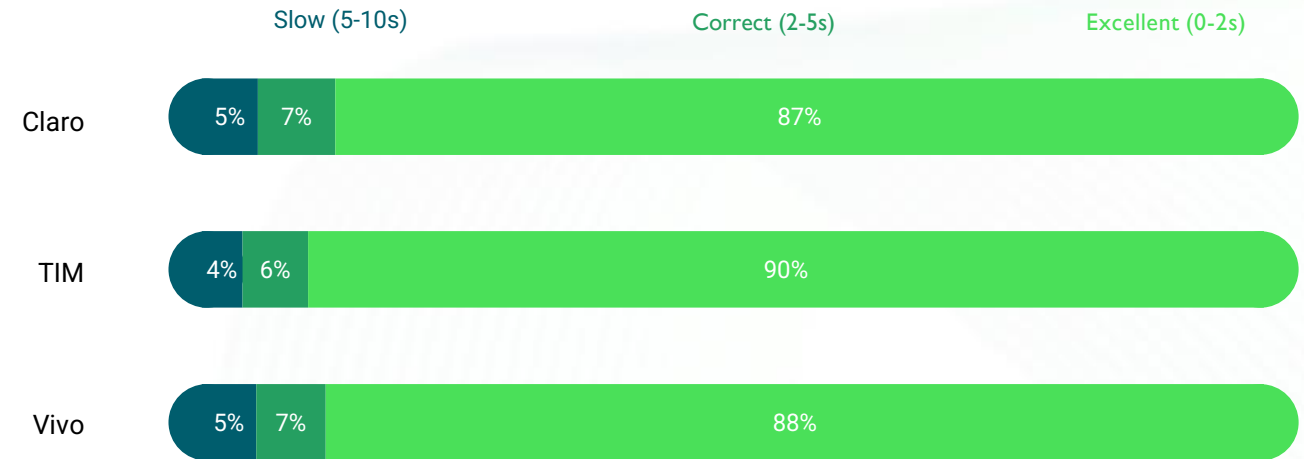
## Streaming Performance rate (average)



Source : nperf.com

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

## Streaming Performance results ventilation (average)



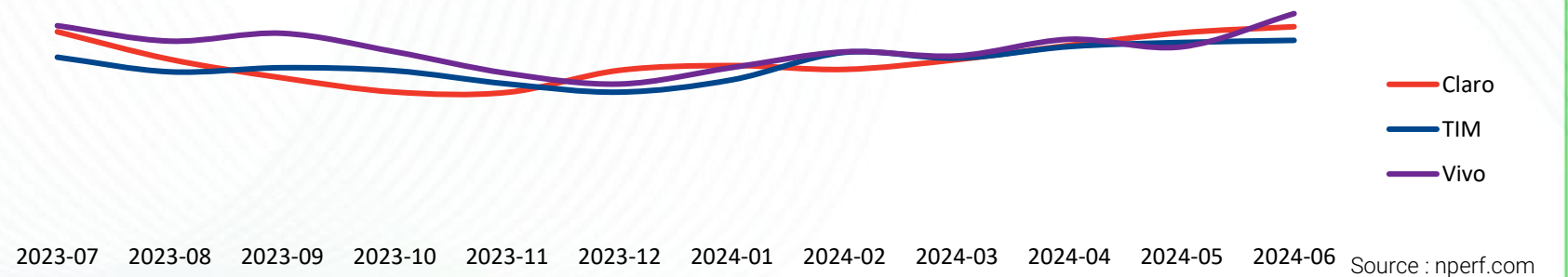
Source : nperf.com

## Streaming Performance rate (average)



Source : nperf.com

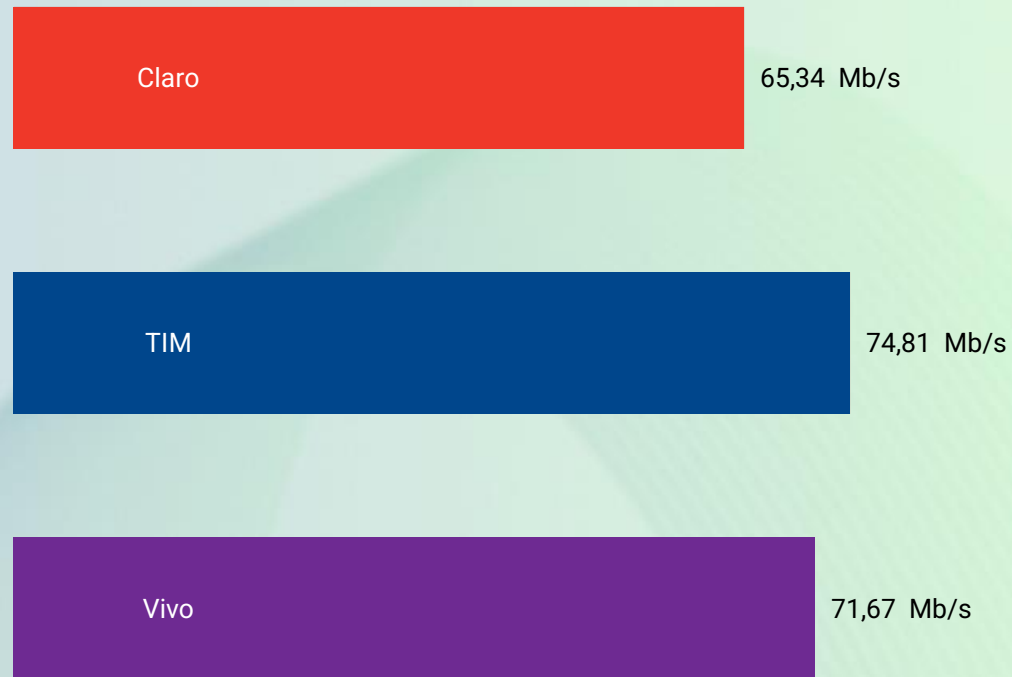
## Streaming performance rate (average) evolution over the year







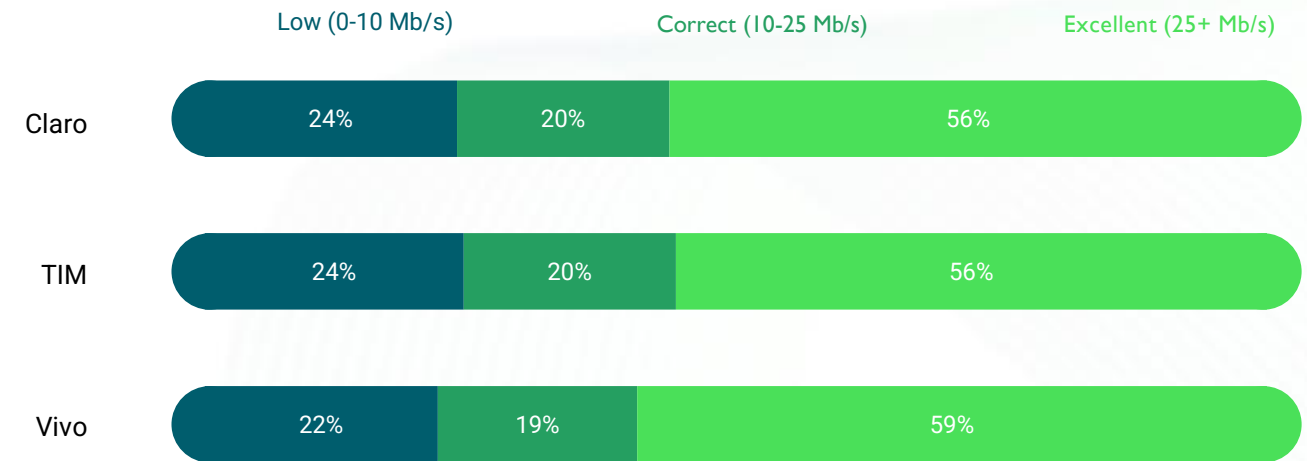
## Download Speed (average)



Source : nperf.com

The subscribers of **TIM** enjoyed the best average mobile Internet download speed in 2024.

## Download Speed results ventilation (average)



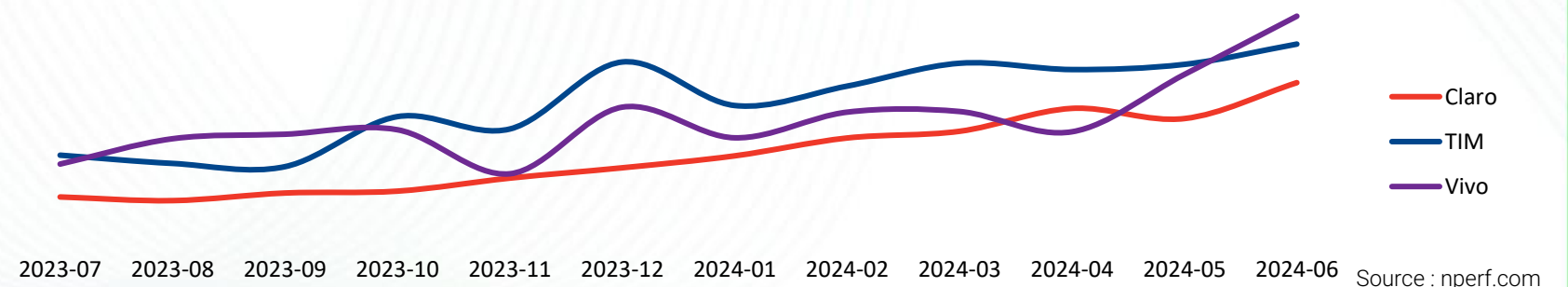
Source : nperf.com

## Download Speed (average)



Source : nperf.com

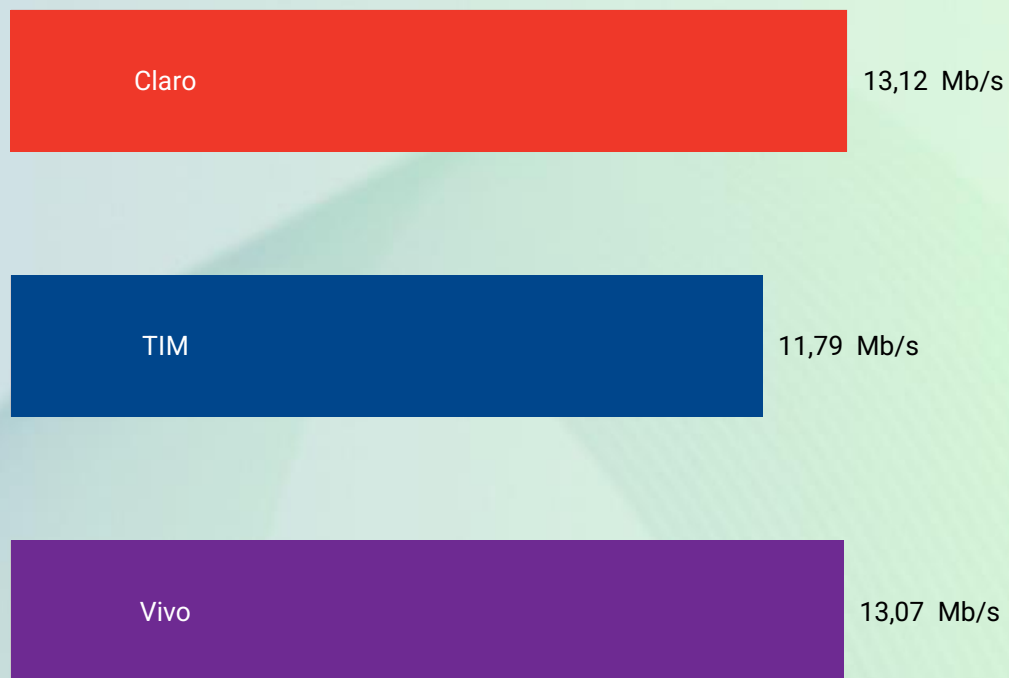
## Download Speed evolution over the year (average)



Source : nperf.com



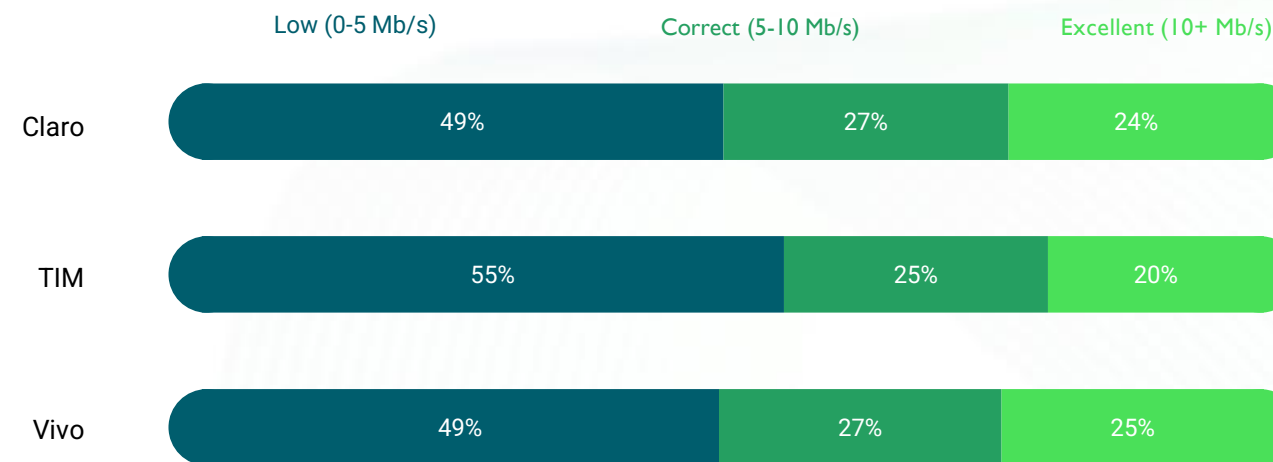
## Upload Speed (average )



Source : nperf.com

The subscribers of **Claro** and **Vivo** enjoyed the best average mobile Internet upload speed in 2024.

## Upload Speed results ventilation (average)



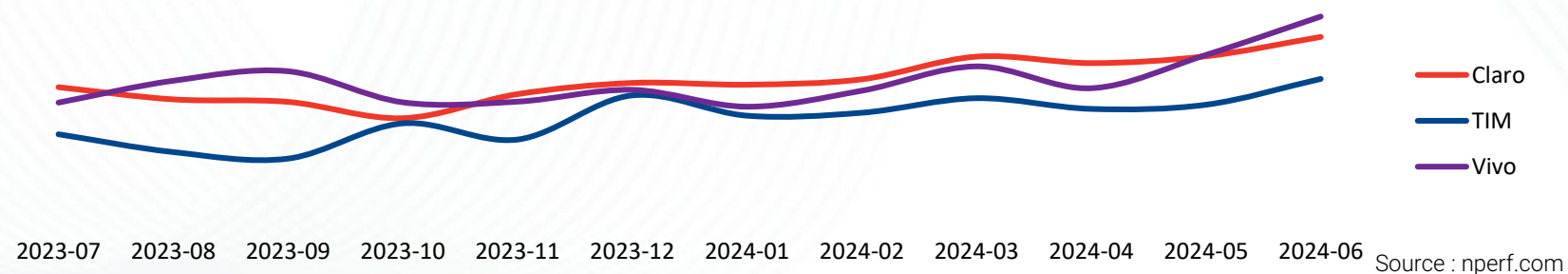
Source : nperf.com

## Upload Speed (average )



Source : nperf.com

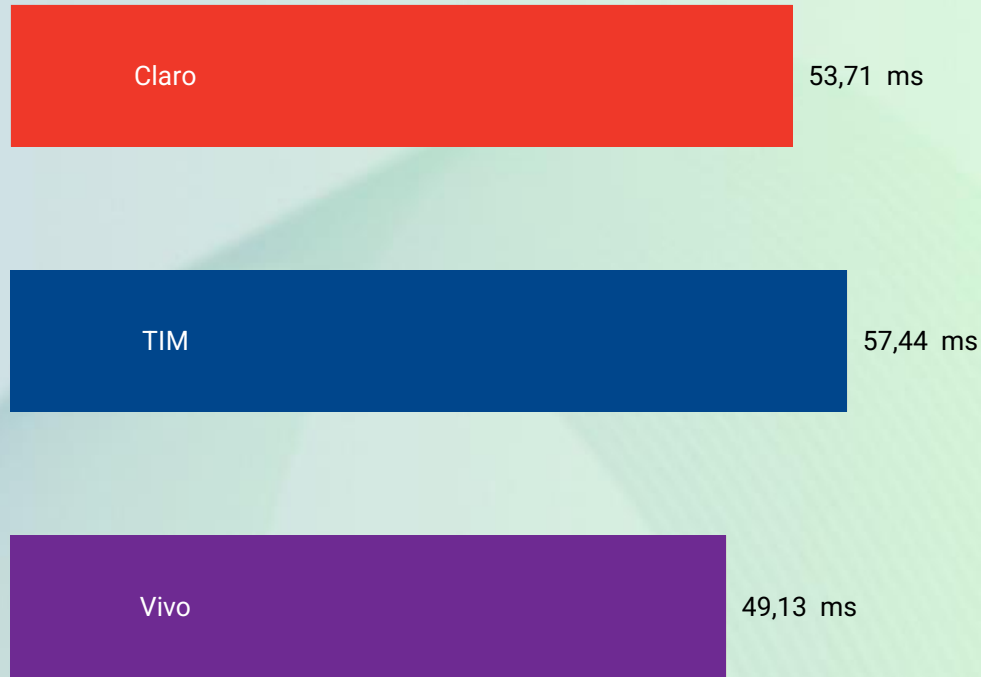
## Upload Speed evolution over the year (average)



Source : nperf.com



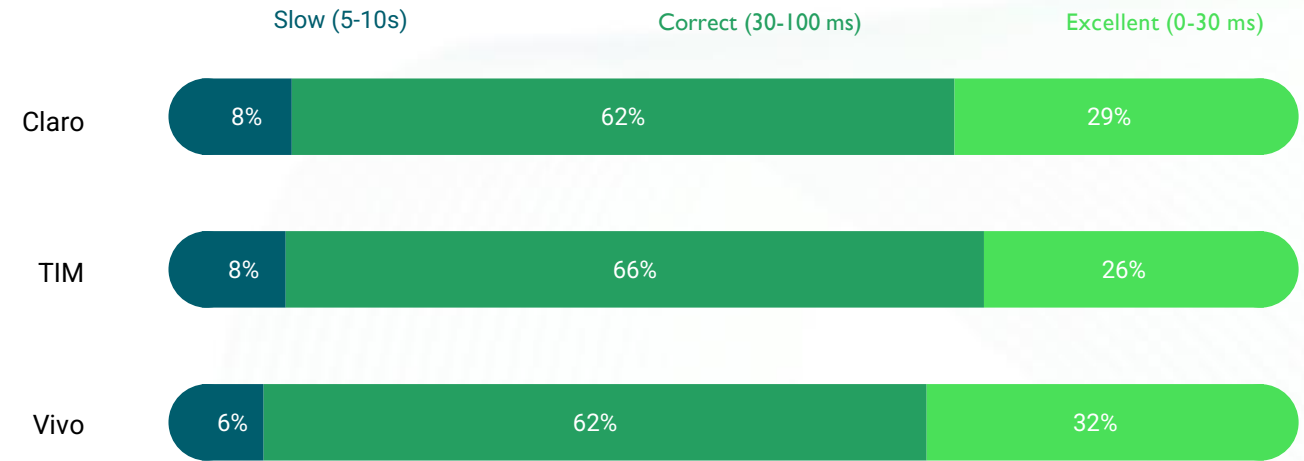
## Latency Speed (average)



Source : nperf.com

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

## Latency Speed results ventilation (average)



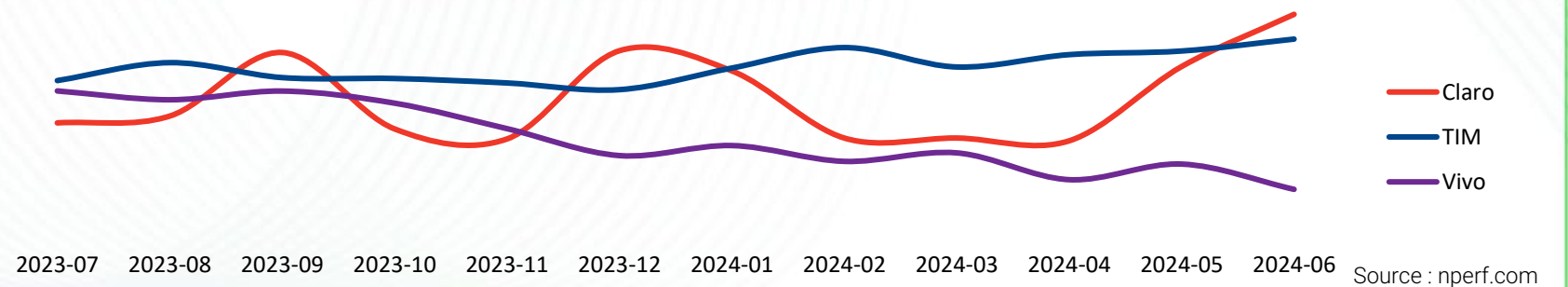
Source : nperf.com

## Latency Speed (average)



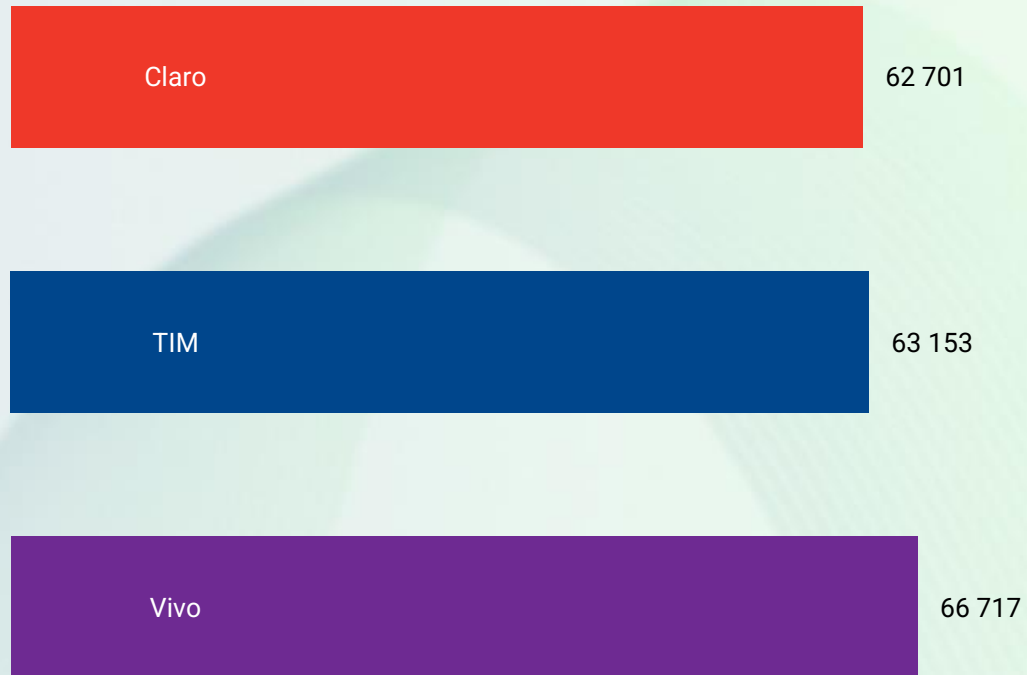
Source : nperf.com

## Latency Speed evolution over the year (average)



Source : nperf.com

## nPerf Score (nPoints)



Source : nperf.com

The subscribers of Vivo enjoyed the best mobile 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



Best mobile Internet performance in 2024



Claro

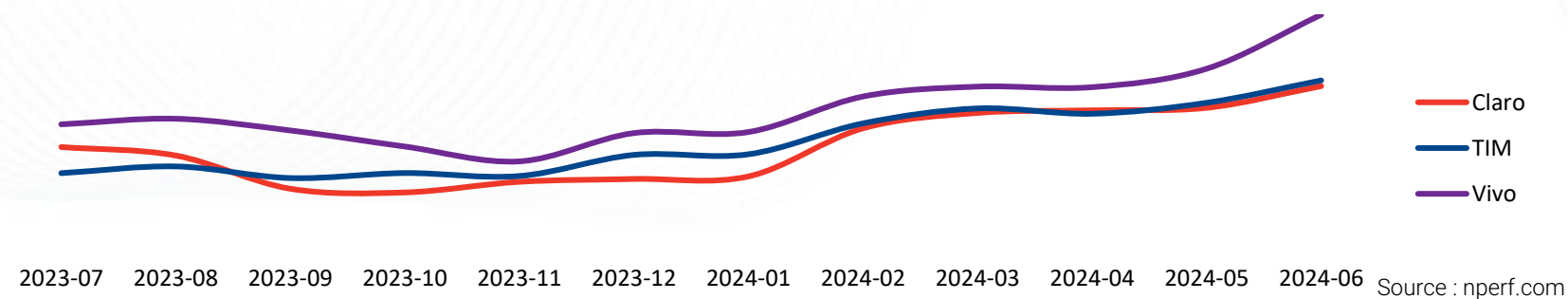


TIM



Source : nperf.com

## nPerf score evolution over the year (average)



Source : nperf.com



We qualify your connection