

# Barometer of mobile Internet connections in Mexico

01/01/2023 - 31/12/2023













4 Methodology



## 1. Introducing nPerf



### **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.







## **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!





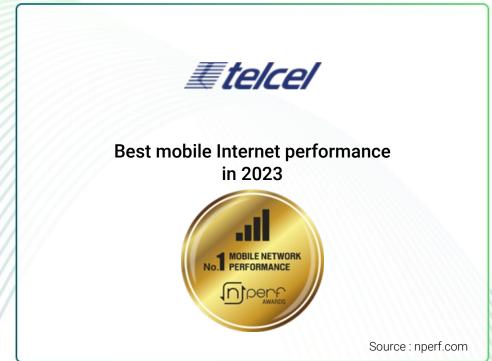


# 2. Executive Summary



The subscribers of Telcel enjoyed the best mobile Internet performances in Mexico during 2023.

		Altan Redes	AT&T / Unefon	Movistar	Telcel
<b>P</b> Do	ownload bitrates (Mb/s)	12.87	16.70	20.74	42.67
Up	oload bitrates (Mb/s)	9.20	7.27	9.62	12.01
I <b>▶</b> La	tency (ms)	124.73	79.93	81.21	79.11
₩ We	eb browsing (%)	52.94	44.94	46.71	40.10
<b>⊙</b> i Yo	outube streaming (%)	68.42	72.82	74.02	79.27
√∩) nF	Perf Score (nPoints)	39 270	41 769	46 079	53 534





## 3. Analysis



The mobile market in Mexico showcases a competitive environment among key Internet Service Providers (ISPs): Altan Redes, AT&T / Unefon, Movistar, and Telcel. Our research delves into their performances based on download and upload bitrates, latency, web browsing, YouTube streaming quality, and overall nPerf scores, offering insights into the quality of mobile internet services available to users in Mexico.

#### **Telcel: the performance leader**

Telcel emerges as the clear leader in Mexico's mobile market with the highest download bitrate of 43 Mb/s and an upload bitrate of 12 Mb/s, accompanied by a competitive latency of 79 ms. Despite a lower browsing score of 40%, Telcel boasts the highest YouTube streaming success rate at 79%, which, combined with its superior download speed, contributes to the highest nPerf score among the ISPs at 53,534 points. This indicates Telcel's strong capability in delivering high-quality streaming and fast internet services, making it a preferred choice for users seeking efficiency and reliability.

#### Movistar: the strong contender

Movistar stands out as a strong contender with commendable download and upload bitrates of 21 Mb/s and 10 Mb/s, respectively, and a latency closely matching that of Telcel at 81 ms. With a browsing score of 47% and a YouTube streaming success rate of 74%, Movistar achieves an nPerf score of 46,079 points. These metrics highlight Movistar's robust service offering, ensuring a seamless user experience, particularly in streaming and browsing activities.

#### AT&T / Unefon: the balanced player

AT&T / Unefon presents a balanced performance with a download bitrate of 17 Mb/s and an upload bitrate of 7 Mb/s, alongside a latency of 80 ms. The ISP has a browsing score of 45% and a streaming score of 73%, culminating in an nPerf score of 41,769 points. This reflects AT&T / Unefon's competent service delivery, catering well to users' multimedia consumption needs.

#### **Altan Redes: room for growth**

Altan Redes, while lagging behind with the lowest download and upload bitrates of 13 Mb/s and 9 Mb/s, respectively, and the highest latency of 125 ms, showcases a browsing score of 53% and a YouTube streaming score of 68%. With an nPerf score of 39,270 points, Altan Redes indicates potential areas for enhancement, particularly in improving speed and reducing latency to enhance the overall user experience.

#### **Conclusion:**

Mexico's mobile market is characterized by diverse performances from its ISPs, with Telcel leading in terms of speed and streaming quality, followed by Movistar, AT&T / Unefon, and Altan Redes.

## 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.

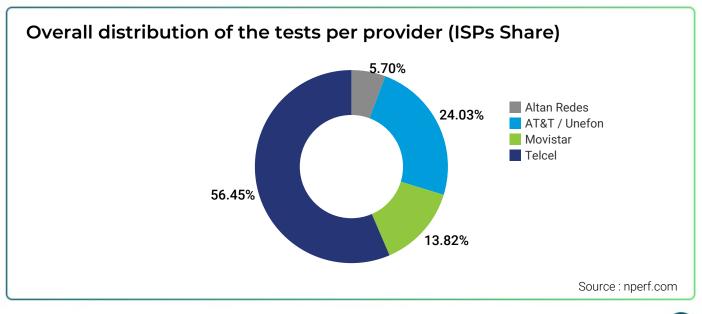
#### **Streaming performance:**

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.

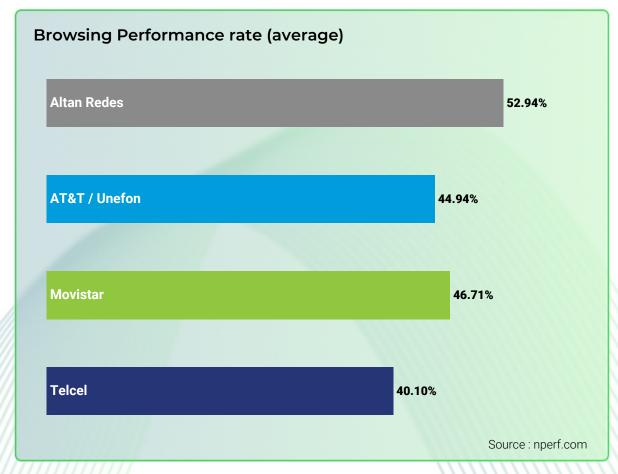
We only include national Internet service providers with test share above 5% share. The chart below shows the overall test distribution for each service provider.



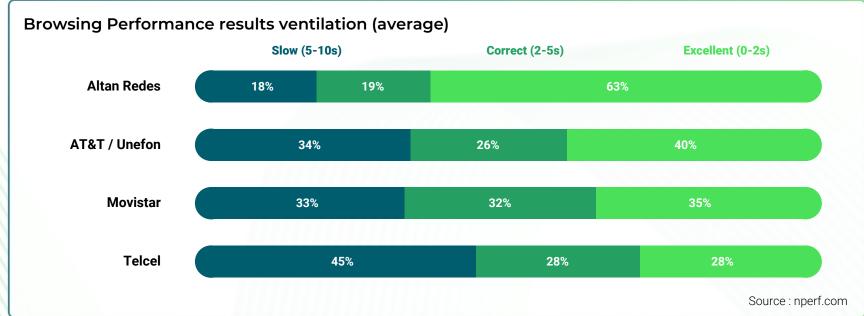


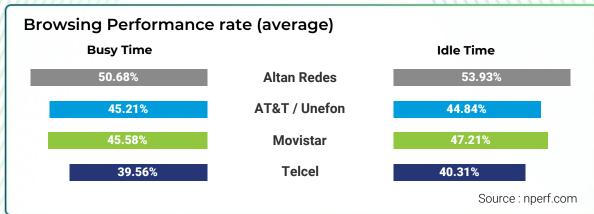
# **Quality of Experience: Browsing**

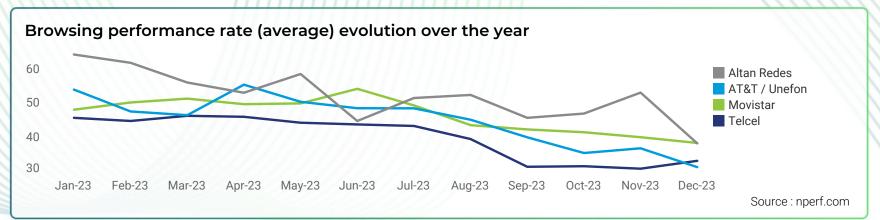




The subscribers of Altan Redes enjoyed the best mobile Internet browsing performance in 2023.



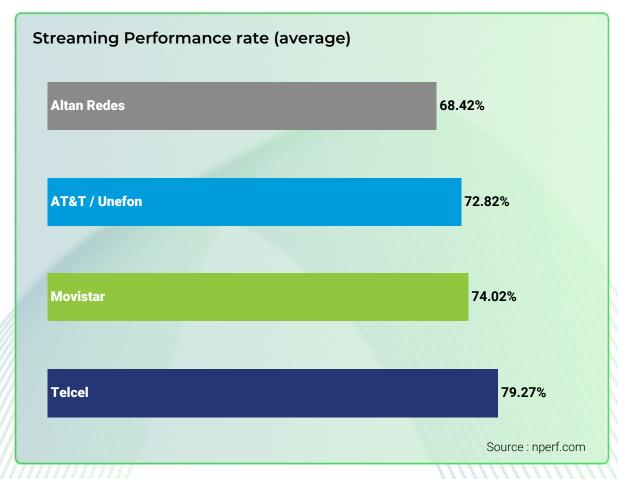




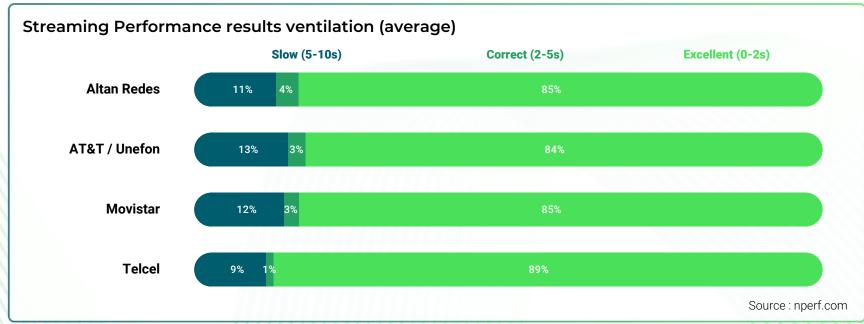


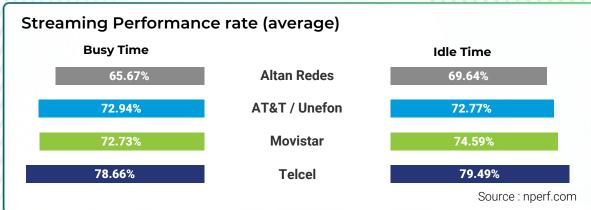
# **Quality of Experience: Streaming**

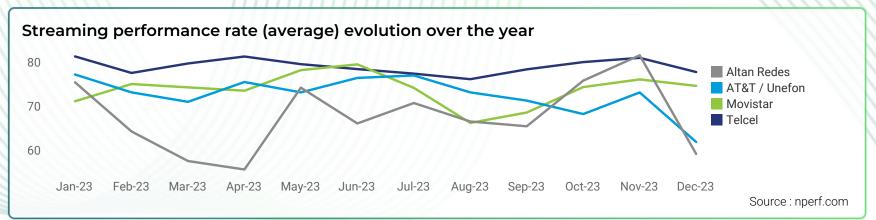




The subscribers of Telcel enjoyed the best mobile Internet Sreaming perforance in 2023.



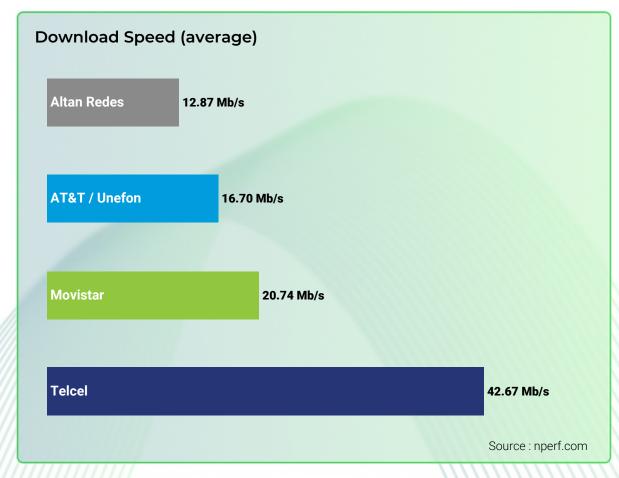




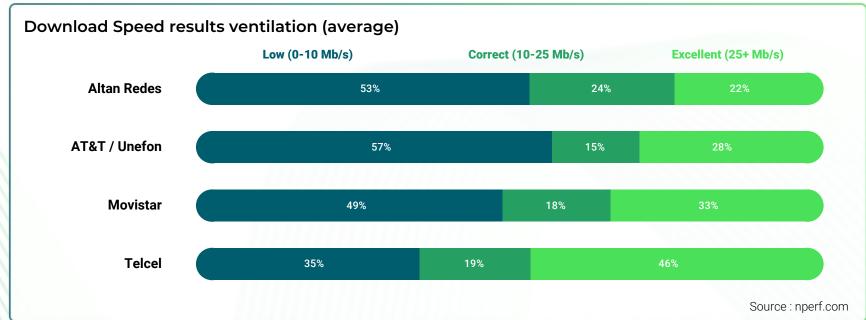


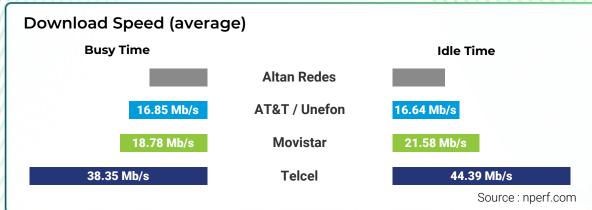
## Speed: Download

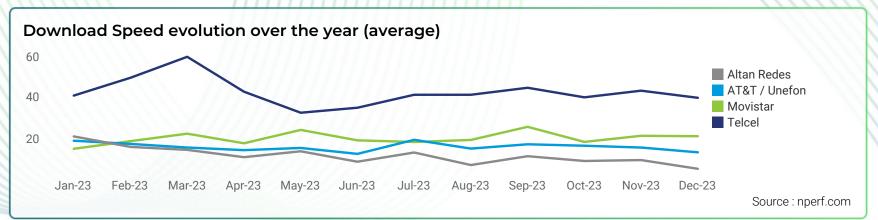




The subscribers of Telcel enjoyed the best average mobile Internet download speed in 2023.



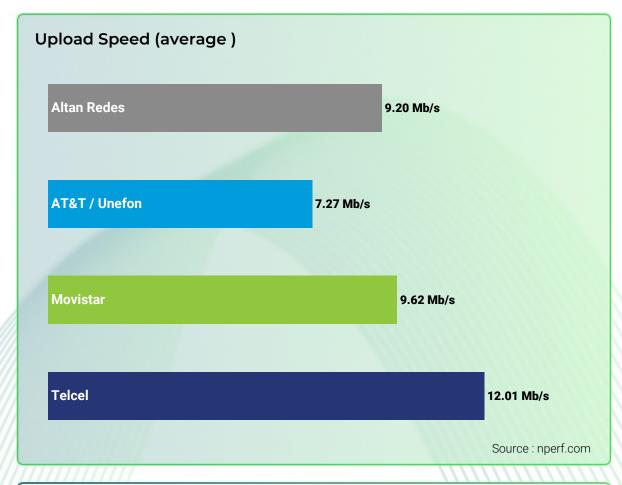




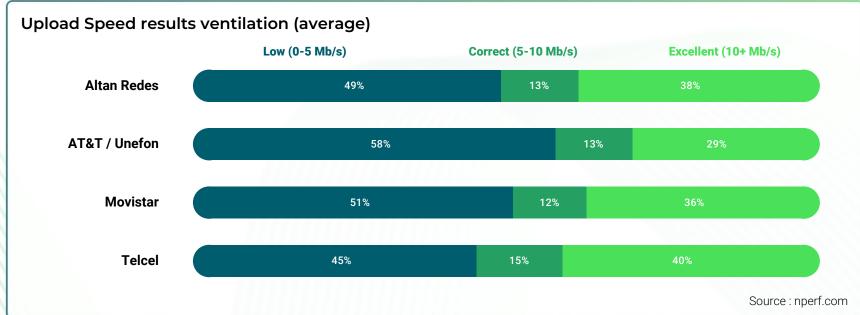


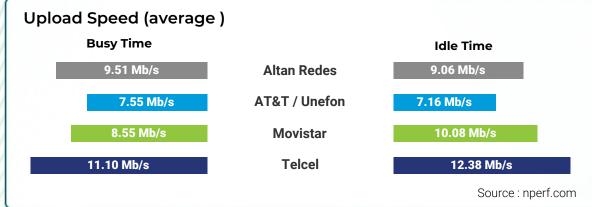
## Speed: Upload

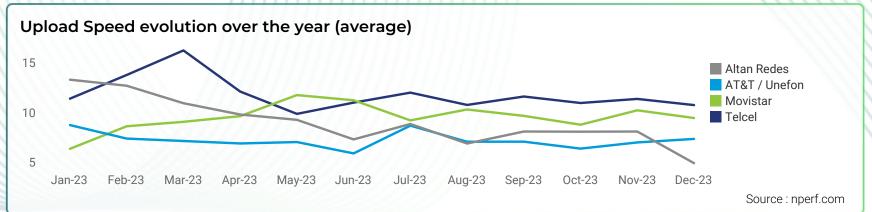




The subscribers of Telcel enjoyed the best average mobile Internet upload speed in 2023.



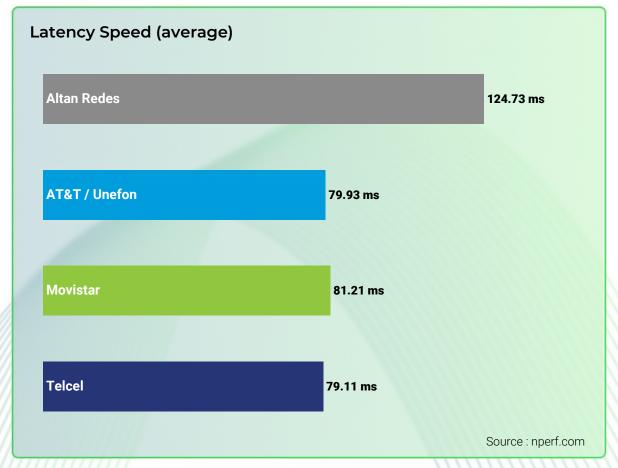




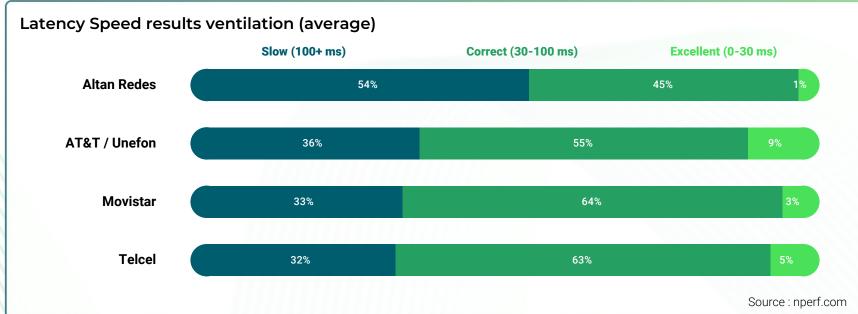


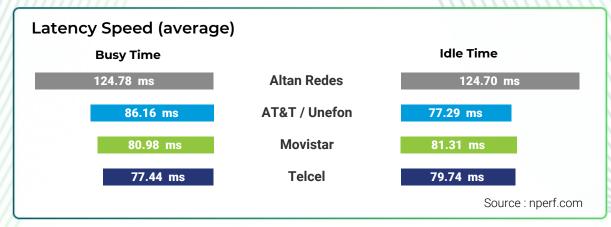
# Speed: Latency

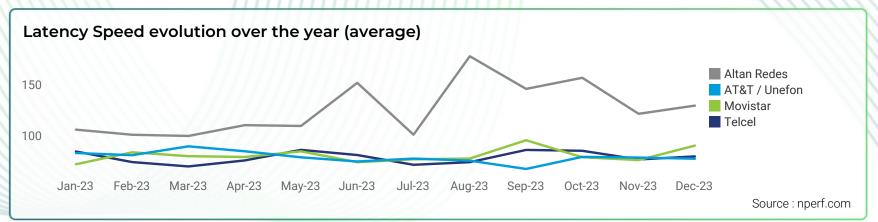




The subscribers of Telcel, AT&T / Unefon and Telcel enjoyed the best average mobile Internet latency speed in 2023.

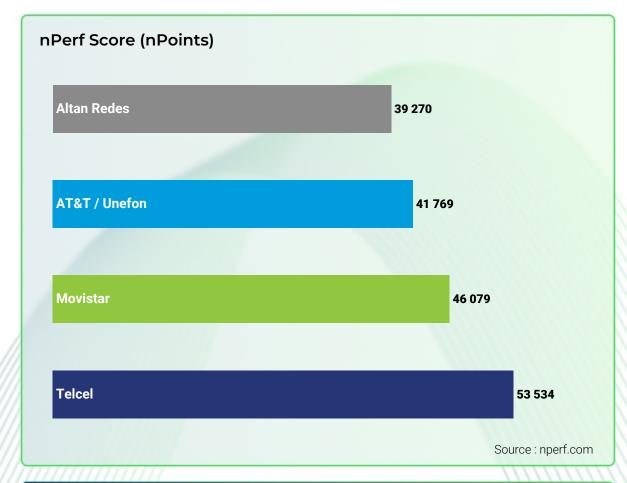






## Mobile Internet performance in Mexico





The subscribers of Telcel enjoyed the best mobile Internet performances in Mexico 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



