



Barometer of fixed Internet Connections in Sweden.

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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2. Executive Summary



The subscribers of Telia and Bahnhof enjoyed the best fixed Internet performances in Sweden during 2023.

Fixed Internet connections in Sweden

	Bahnhof	Bredband2	Tele2	Telenor	Telia	Tre
▼ Download bitrates (Mb/s)	193.83	136.74	118.32	109.86	167.68	71.92
▲ Upload bitrates (Mb/s)	160.45	110.61	52.79	99.69	154.25	19.52
◀▶ Latency (ms)	61.36	56.97	59.60	43.88	44.81	33.58
🌐 Web browsing (%)	84.56	83.60	76.51	78.01	84.03	75.93
📺 Youtube streaming (%)	92.18	87.60	86.89	87.99	93.13	85.31
📊 nPerf Score (nPoints)	121 057	110 943	98 755	107 436	123 275	92 537

Source : nperf.com



Best fixed Internet performance
in 2023



Source : nperf.com



Bredband2

TELE2



Source : nperf.com

3. Analysis



In Sweden's dynamic fixed Internet market, Telia and Bahnhof stand out as frontrunners, closely matched in their service offerings and performance. This analysis delves into the capabilities of these leading ISPs, alongside others like Bredband2, Tele2, Telenor, and Tre, by examining crucial metrics such as download and upload bitrates, latency, web browsing and YouTube streaming scores, and overall nPerf scores.

Telia: Excellence in connectivity

Telia showcases its strength with an nPerf score of 123,275 nPoints, underpinned by high download and upload bitrates of 167.68 Mb/s and 154.25 Mb/s respectively. These speeds indicate a robust network infrastructure capable of supporting demanding online activities seamlessly. Telia's latency of 44.81 ms ensures a responsive internet experience, further enhanced by web browsing and YouTube streaming scores of 84.03 and 93.13, highlighting its commitment to delivering high-quality content efficiently.

Bahnhof: The speed maverick

Bahnhof closely matches Telia's prowess, boasting the highest download bitrate in the analysis at 193.83 Mb/s and an upload bitrate of 160.45 Mb/s. Despite a slightly higher latency of 61.36 ms, Bahnhof maintains commendable web browsing and YouTube streaming scores of 84.56 and 92.18, respectively. With an nPerf score of 121,057 nPoints, Bahnhof demonstrates its capability to offer ultra-fast and reliable internet services, making it a top choice for Swedish users seeking exceptional speed and performance.

Bredband2: A strong competitor

Bredband2 exhibits solid performance with an nPerf score of 110,943 nPoints, supported by download and upload speeds of 136.74 Mb/s and 110.61 Mb/s. Its latency of 56.97 ms and browsing scores Web and YouTube streaming ratings of 83.6 and 87.6 highlight Bredband2's reliable service that ensures user satisfaction.

Tele2: Consistency and reliability

Tele2 offers a consistent service with an nPerf score of 98,755 nPoints, featuring download and upload bitrates of 118.32 Mb/s and 52.79 Mb/s. Despite a latency of 59.6 ms, Tele2's web browsing and YouTube streaming scores of 76.51 and 86.89 reflect its ability to meet the general needs of its users.

Telenor: Balanced offerings

Telenor provides a balanced service with an nPerf score of 107,436 nPoints, and download and upload bitrates of 109.86 Mb/s and 99.69 Mb/s. Its lower latency of 43.88 ms and decent web browsing and YouTube streaming scores of 78.01 and 87.99 position Telenor as a reliable option for those seeking a well-rounded internet service.

Tre: Potential for growth

Tre, with an nPerf score of 92,537 nPoints, shows room for improvement with download and upload bitrates of 71.92 Mb/s and 19.52 Mb/s. Its low latency of 33.58 ms and web browsing and YouTube streaming scores of 75.93 and 85.31 indicate that while Tre caters to basic internet requirements, there is potential for enhancing service quality.

Conclusion

Telia and Bahnhof stand in close competition at the forefront of Sweden's fixed internet market, each displaying distinct strengths in speed, reliability, and overall service quality. Alongside them, ISPs like Bredband2, Tele2, Telenor, and Tre contribute to a competitive and diverse market landscape, offering a range of services to meet the varied needs of Swedish users. This comprehensive analysis underscores the importance of evaluating ISPs across multiple performance metrics to fully understand their impact on the quality of fixed internet service and user experience in Sweden.

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.



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 :

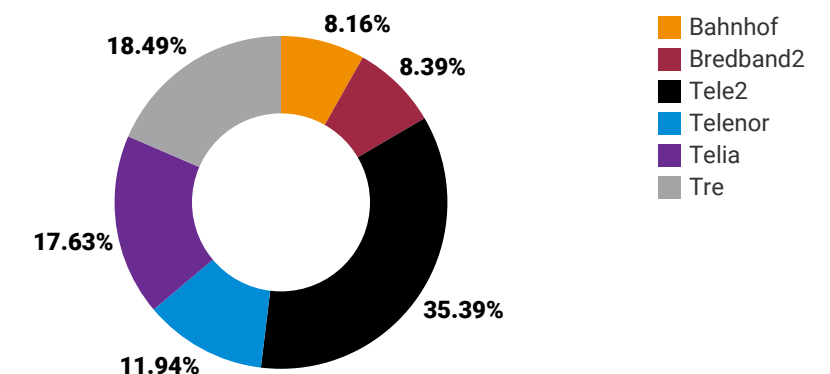
The video streaming test gauges the load time of a fully loaded video in three resolutions on YouTube, considering stalls during playback. This indicator reflects the user's perceived quality of the Internet network.

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.

Overall distribution of the tests per provider (ISPs Share)



Source : nperf.com



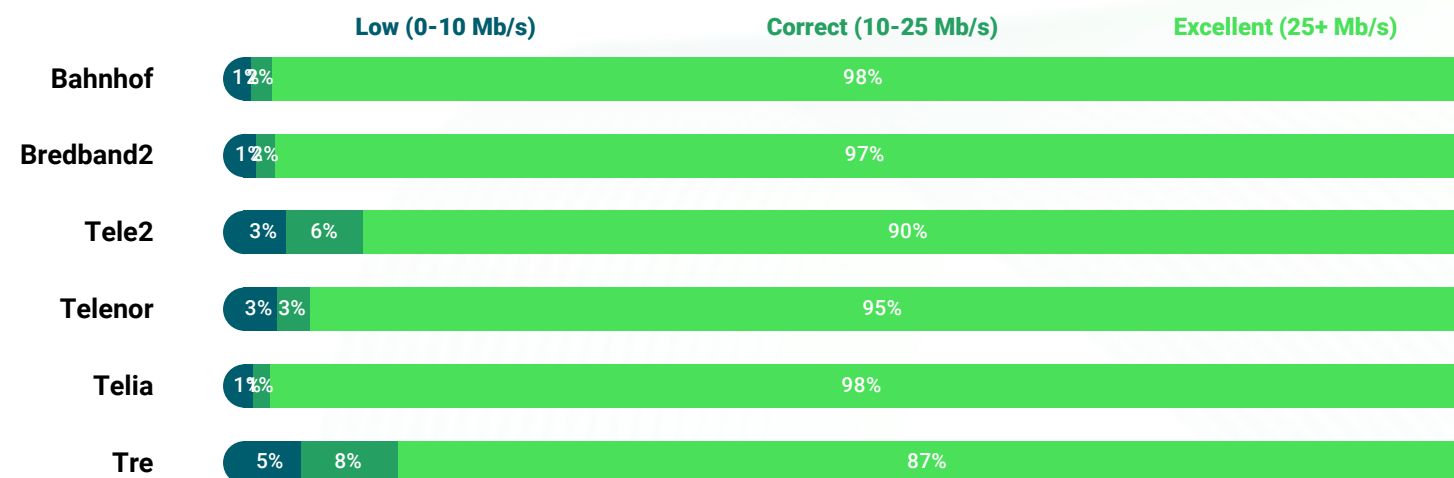
Browsing Performance rate (average)



Source : nperf.com

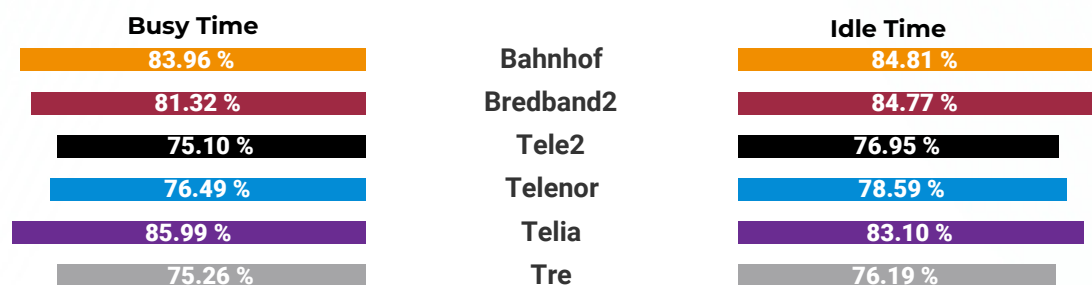
The subscribers of Bahnhof, Telia and Bredband2 enjoyed the best fixed Internet browsing performance in 2023.

Browsing Performance results ventilation (average)



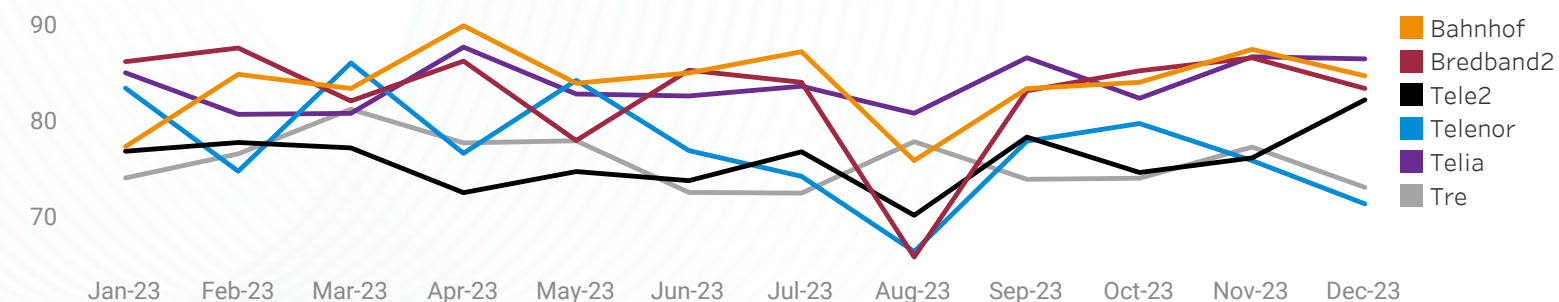
Source : nperf.com

Browsing Performance rate (average)



Source : nperf.com

Browsing performance rate (average) evolution over the year



Source : nperf.com



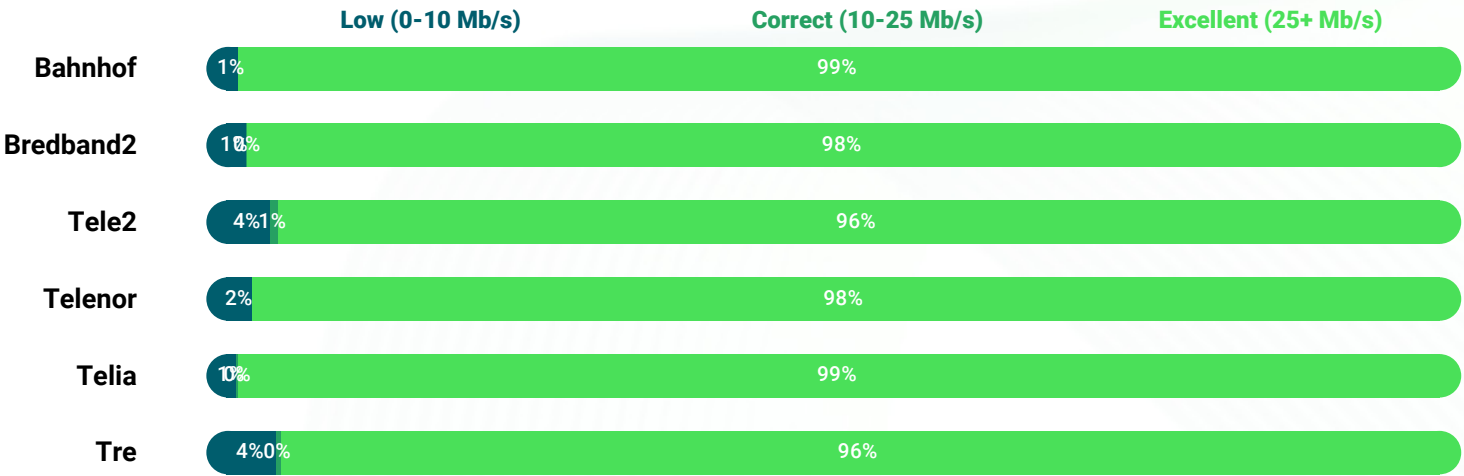
Streaming Performance rate (average)



Source : nperf.com

The subscribers of Telia enjoyed the best fixed Internet streaming performance in 2023.

Streaming Performance results ventilation (average)



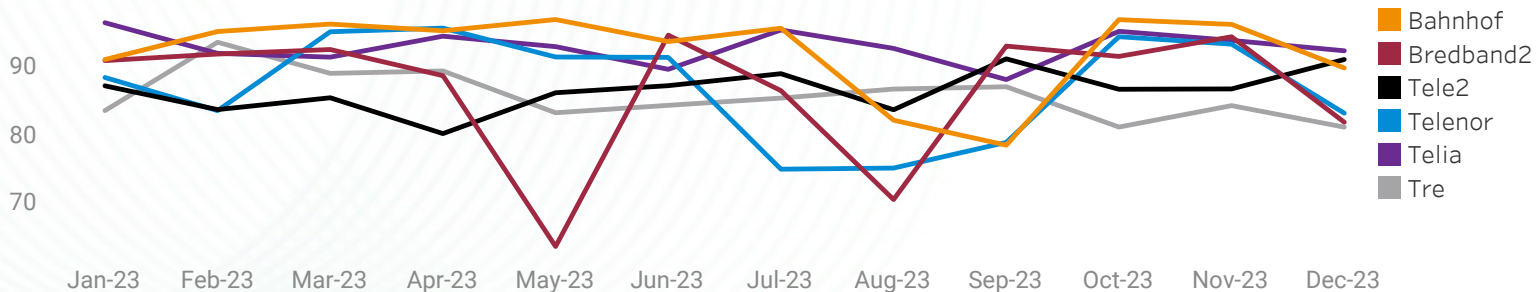
Source : nperf.com

Streaming Performance rate (average)



Source : nperf.com

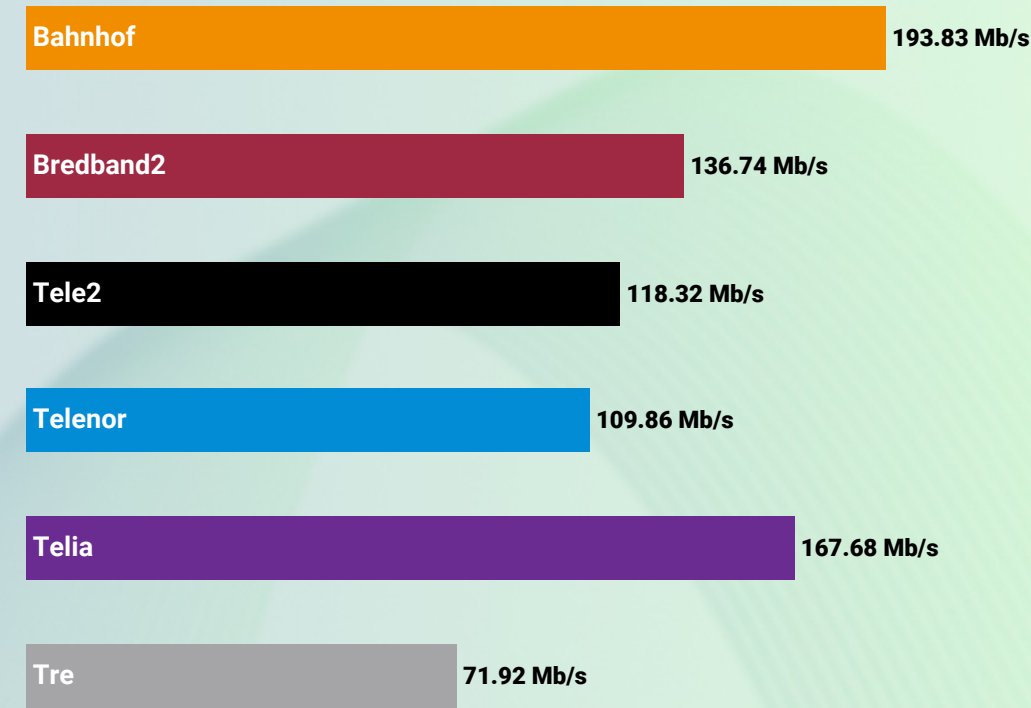
Streaming performance rate (average) evolution over the year



Source : nperf.com



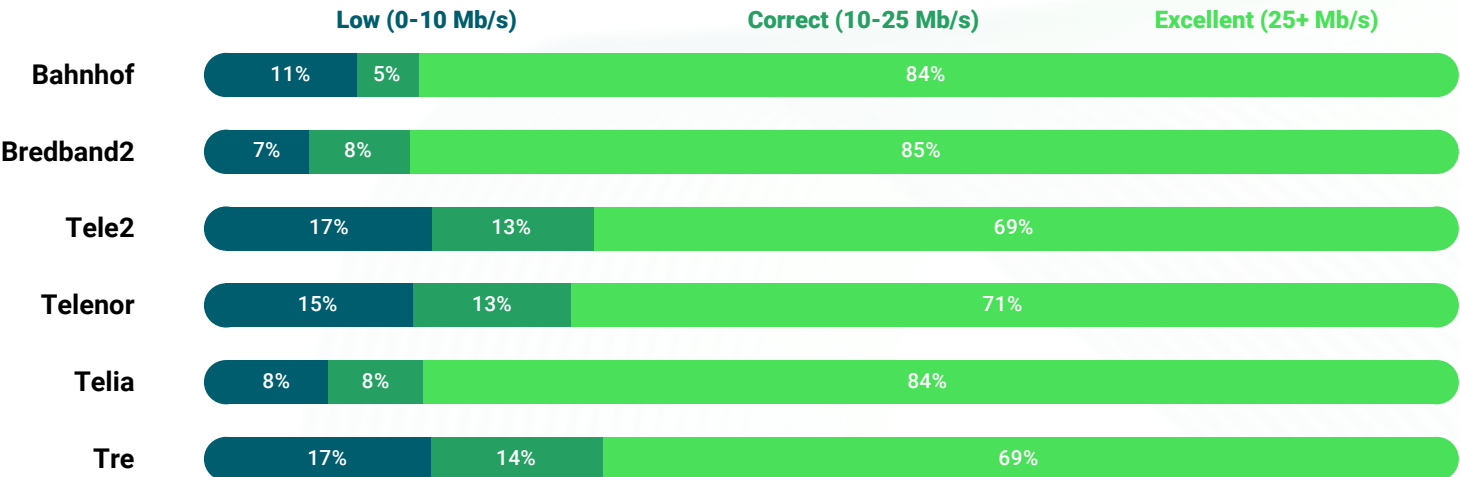
Download Speed (average)



Source : nperf.com

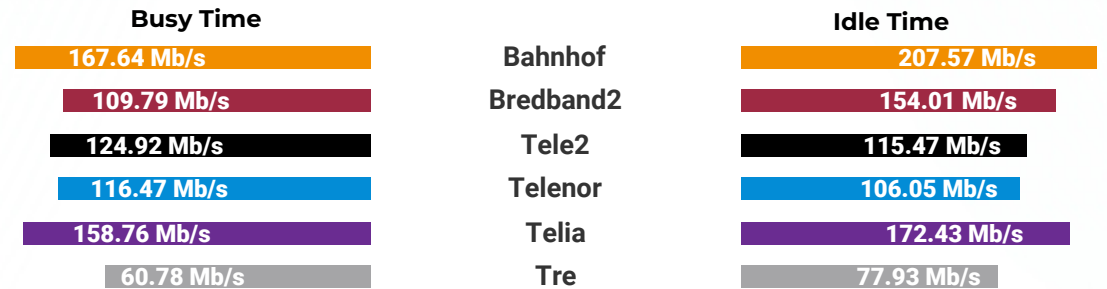
The subscribers of Bahnhof enjoyed the best average broadband download speed in 2023.

Download Speed results ventilation (average)



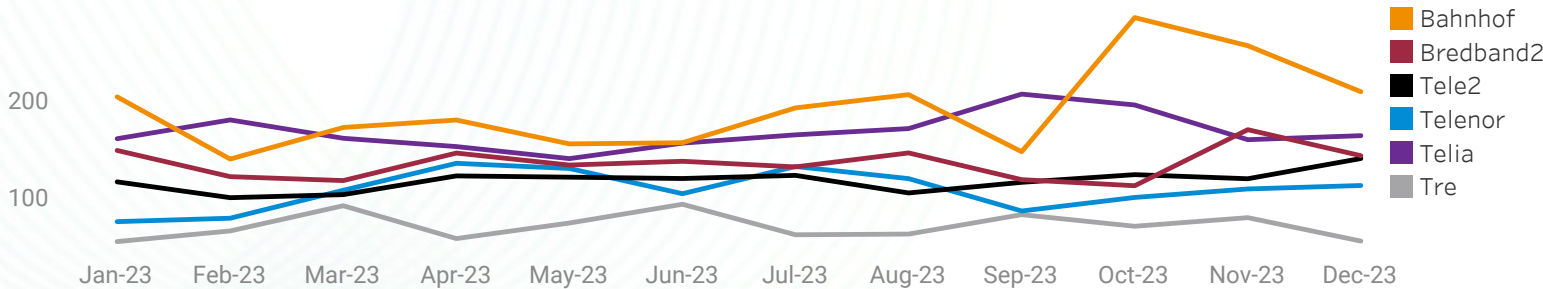
Source : nperf.com

Download Speed (average)



Source : nperf.com

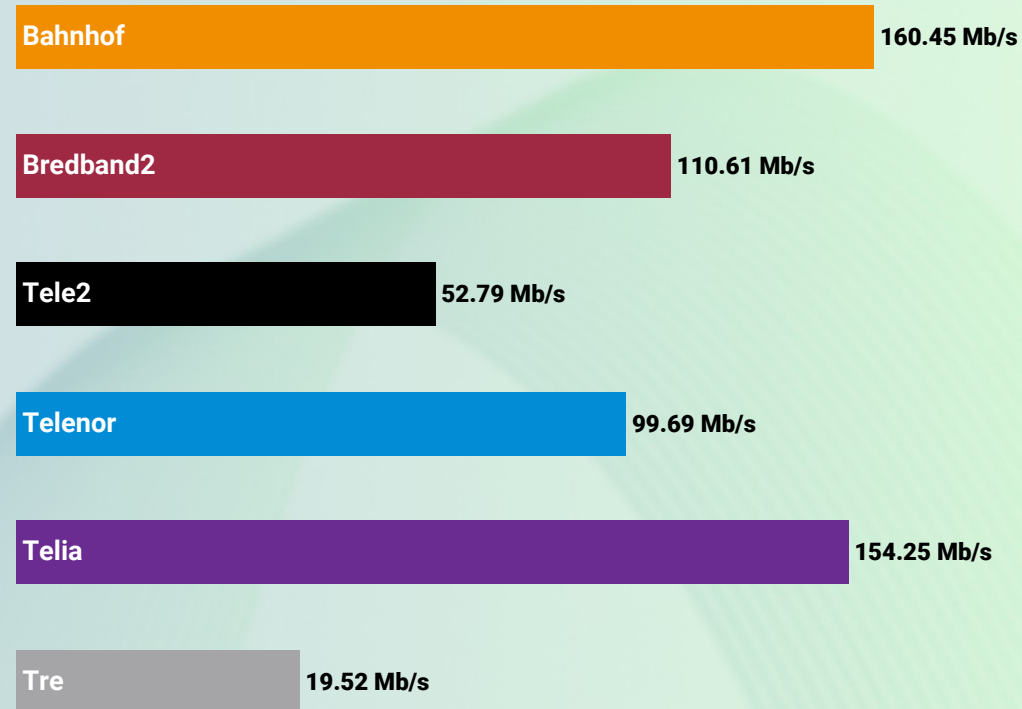
Download Speed evolution over the year (average)



Source : nperf.com



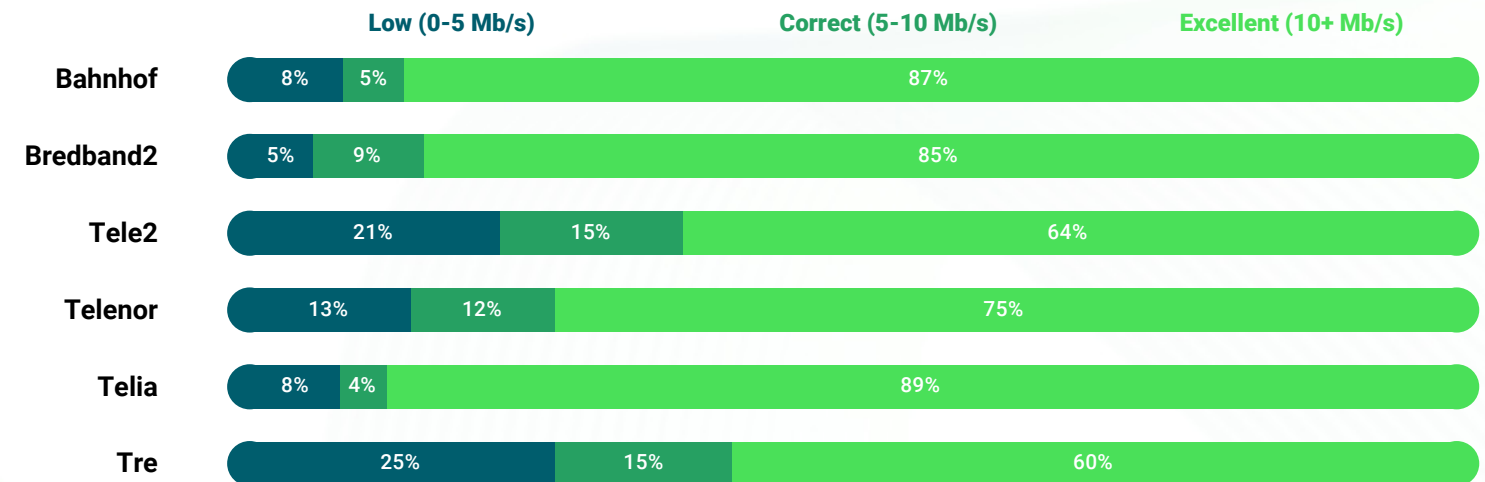
Upload Speed (average)



Source : nperf.com

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

Upload Speed results ventilation (average)



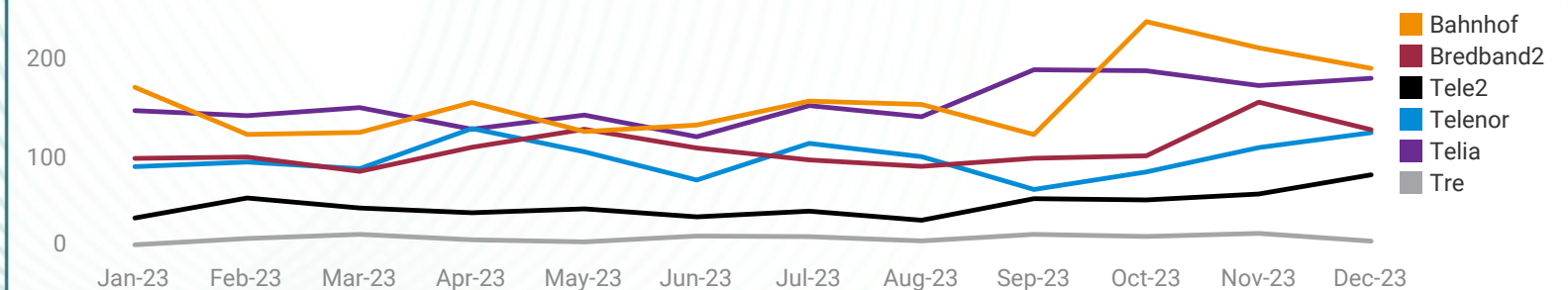
Source : nperf.com

Upload Speed (average)



Source : nperf.com

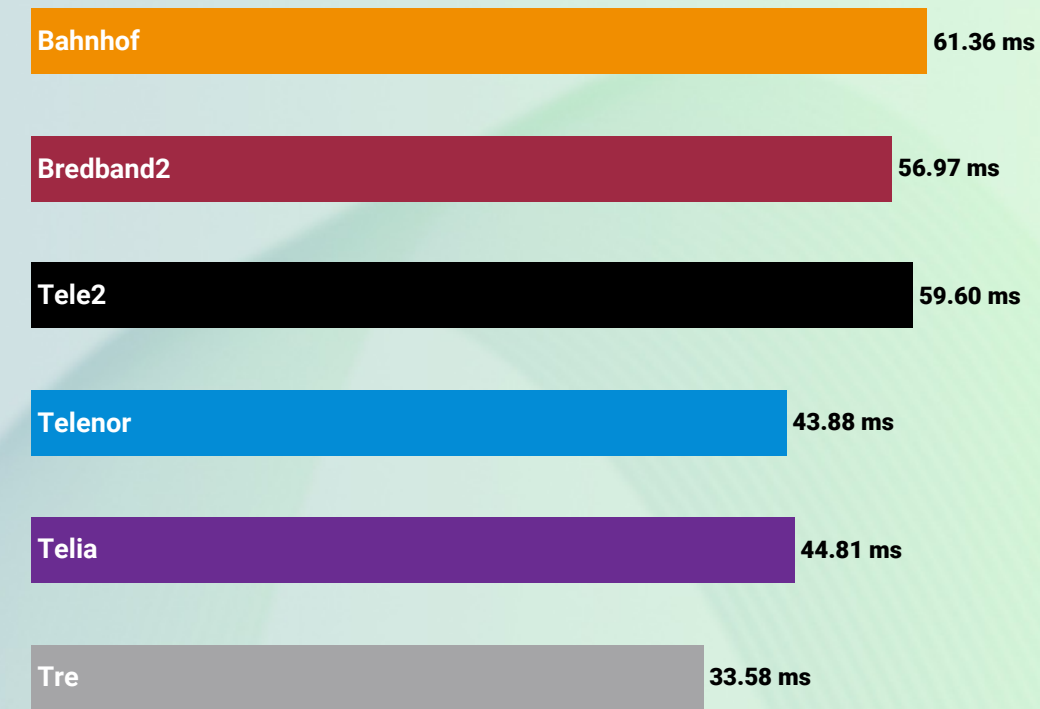
Upload Speed evolution over the year (average)



Source : nperf.com



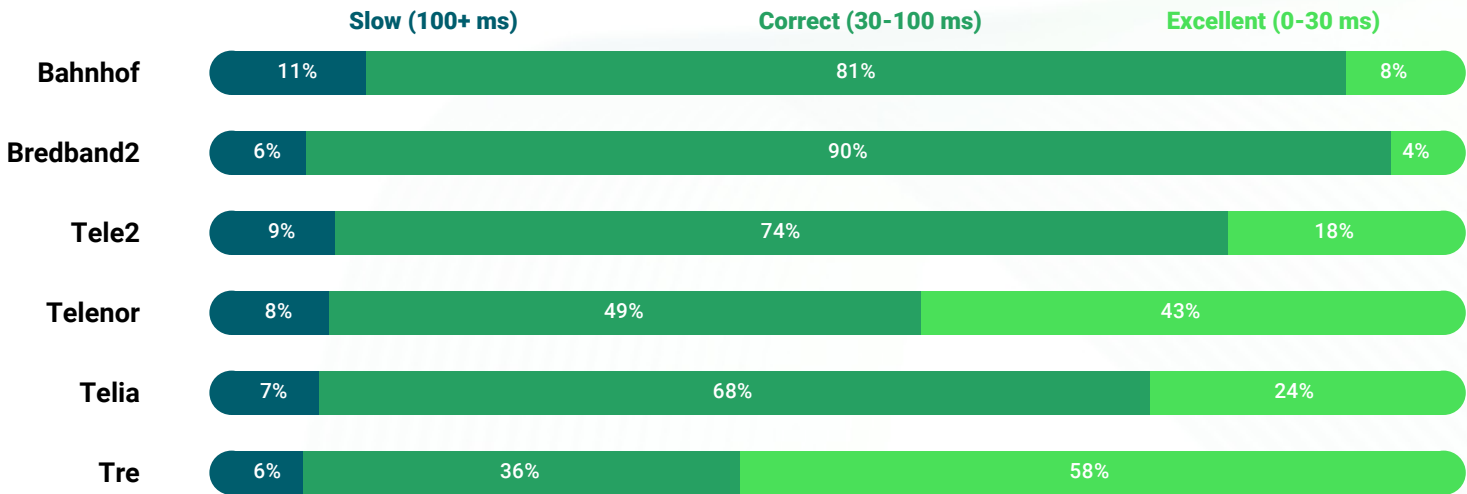
Latency Speed (average)



Source : nperf.com

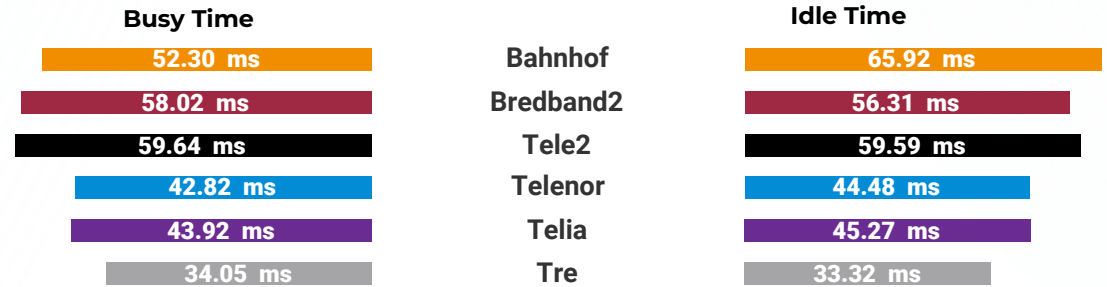
The subscribers of Tre enjoyed the best average broadband latency in 2023.

Latency Speed results ventilation (average)



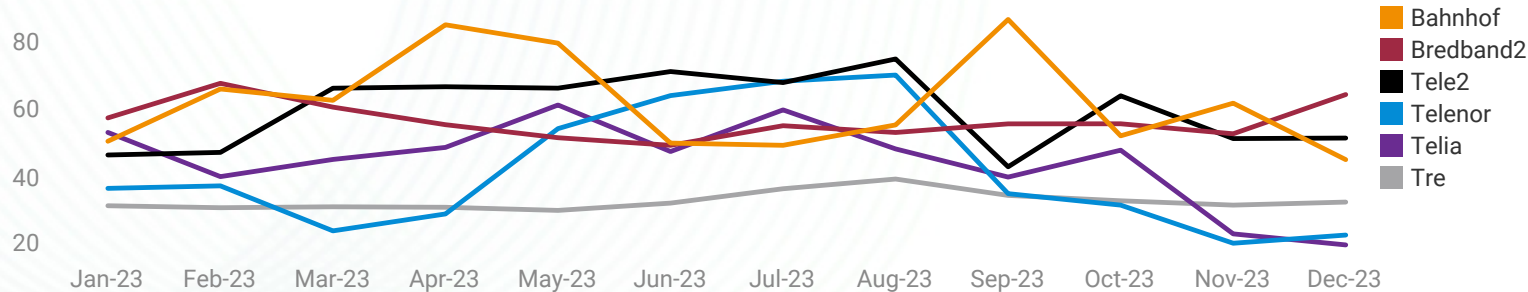
Source : nperf.com

Latency Speed (average)



Source : nperf.com

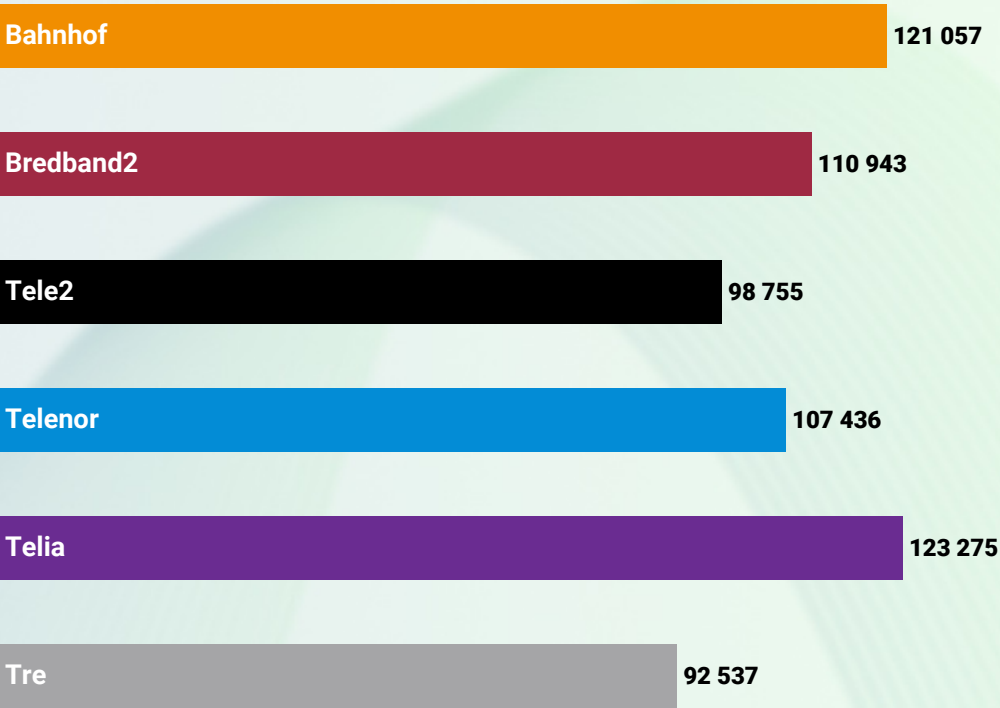
Average latency Speed evolution over the year



Source : nperf.com



nPerf Score (nPoints)



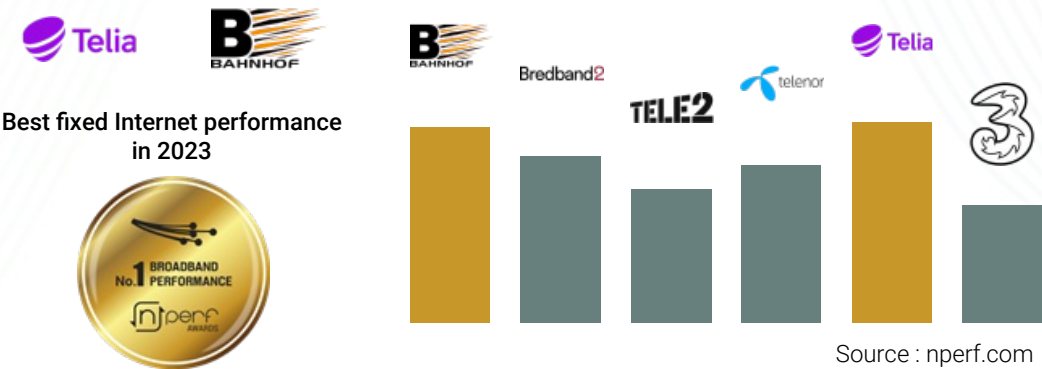
Source : nperf.com

The subscribers of Telia and Bahnhof enjoyed the best fixed Internet performances in Sweden 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.

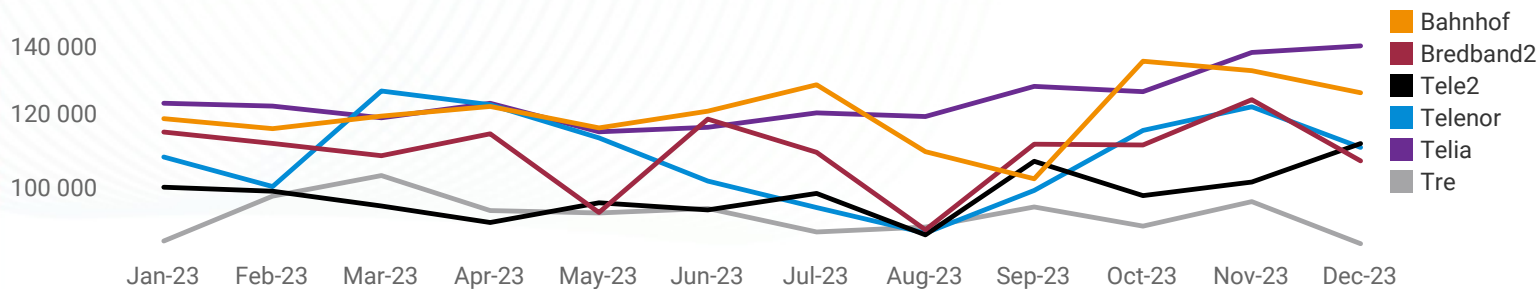
Thus, this score reflects the overall quality of the connection experienced by the user.

Source : nperf.com



Source : nperf.com

nPerf score evolution over the year (average)



Source : nperf.com

