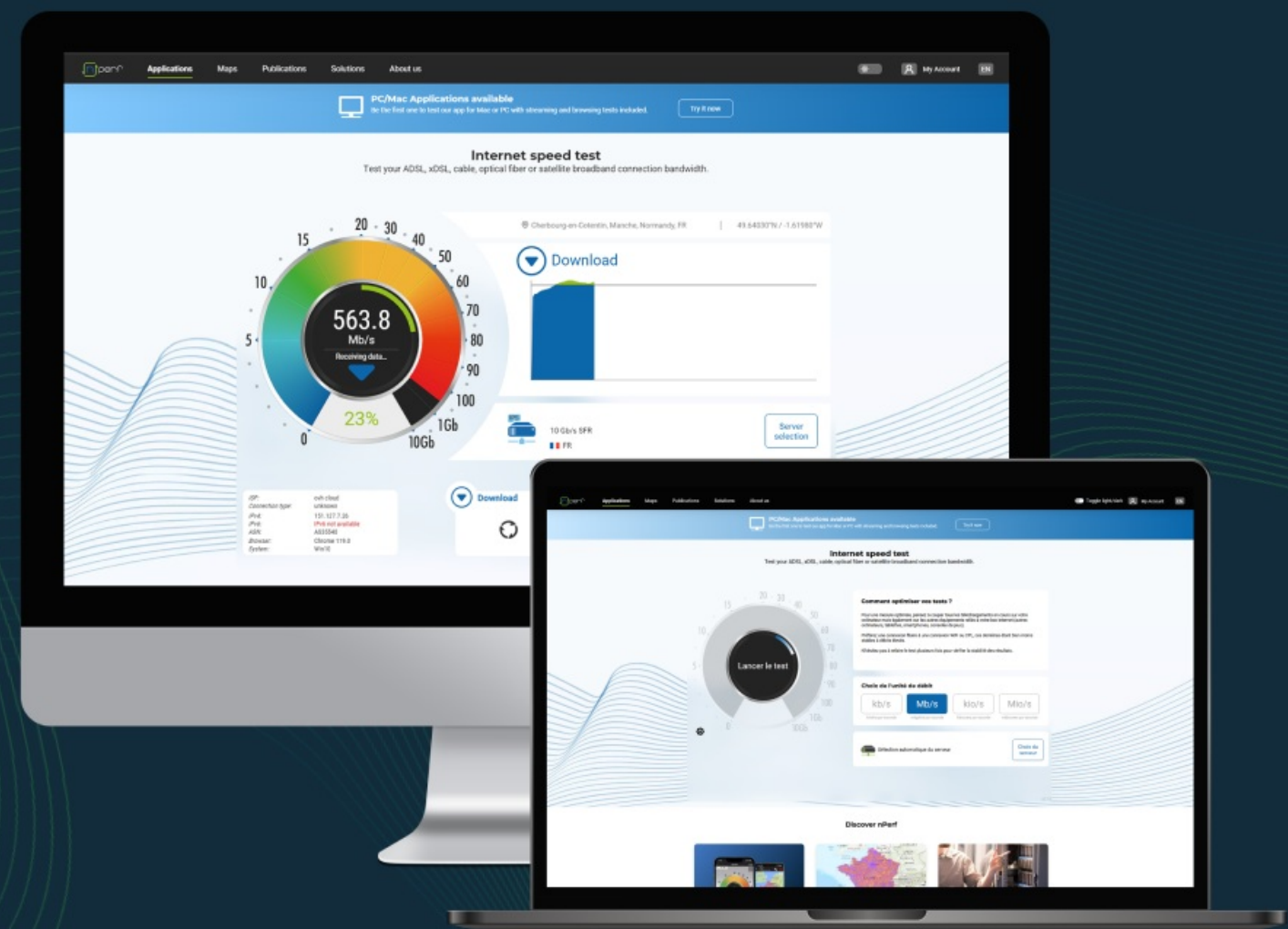




# Barometer of fixed Internet Connections in Finland.

01/01/2023 - 31/12/2023



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**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.

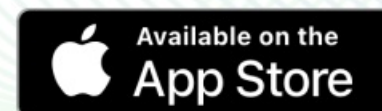
 **300k+** tests daily worldwide.

 **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 Elisa enjoyed the best broadband performances in Finland during 2023.

### Fixed Internet connections in Finland

	DNA	Elisa	Telia
▼ Download bitrates (Mb/s)	113.14	120.23	91.47
▲ Upload bitrates (Mb/s)	32.22	51.71	32.60
◀▶ Latency (ms)	78.49	50.11	58.24
🌐 Web browsing (%)	73.83	79.95	75.64
🎥 Youtube streaming (%)	87.82	89.52	89.19
nPerf Score (nPoints)	91 222	104 671	93 419

Source : nperf.com



Best fixed Internet performance in 2023



Source : nperf.com



Source : nperf.com

The Finnish fixed Internet market is distinguished by its high-quality service offerings, with ISPs being evaluated on critical performance metrics such as download and upload bitrates, latency, web browsing success rates, YouTube streaming performance, and overall nPerf scores. These indicators are essential for understanding each ISP's capability to provide reliable and fast internet services.

### **Elisa: Leader with superior performance at all levels**

Elisa emerges as the leading figure in the fixed Internet sector in Finland, with an impressive nPerf score of 104,671 nPoints. This leadership position is backed by the market's highest download bitrate of 120.23 Mb/s, coupled with a substantial upload bitrate of 51.71 Mb/s, effectively addressing heavy download tasks and download-centric activities like content creation and online backups. With a latency of 50.11 ms, Elisa ensures a smooth and responsive Internet experience. The ISP also excels in web browsing and YouTube streaming, with success rates of 79.95% and 89.52% respectively, illustrating its commitment to providing an optimal online experience.

### **DNA: Competitive**

DNA offers a solid service with a download throughput of 113.14 Mb/s and an upload speed of 32.22 Mb/s. Although its latency of 78.49 ms is higher than that of Elisa, DNA still maintains a commendable web browsing success rate of 73.83% and a YouTube streaming performance of 87.82%. An nPerf score of 91,222 nPoints positions DNA as a serious competitor in the Finnish Internet market, demonstrating its ability to provide quality services.

### **Telia: Room for improvement**

Telia maintains a consistent presence in the market with a download bitrate of 91.47 Mb/s and an upload bitrate of 32.6 Mb/s. ISP latency of 58.24 ms enables a responsive online experience and satisfying, as evidenced by its web browsing and YouTube streaming success rates of 75.64% and 89.19% respectively. With an nPerf score of 93,419 nPoints, Telia demonstrates its commitment to providing reliable Internet services.

### **Conclusion**

The Finnish fixed Internet market is characterized by high-quality services, with Elisa leading the way in terms of speed, efficiency, and overall user experience. DNA and Telia also offer competitive services, ensuring that Finnish consumers have access to a range of reliable Internet options.

## 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 :

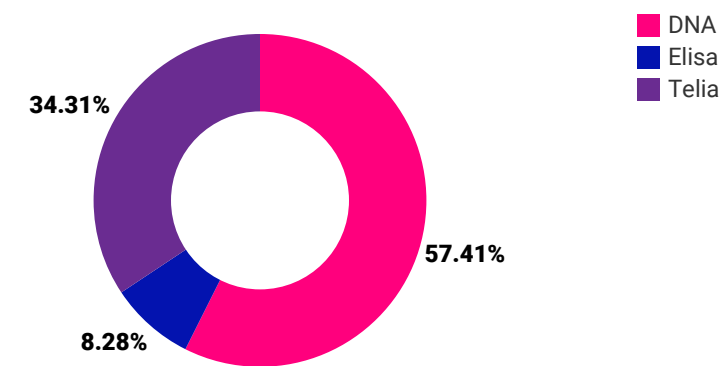
The video streaming test gauges the load time of a fully loaded video in three resolutions on YouTube, considering stalls during playback. This indicator reflects the user's perceived quality of the Internet network.

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



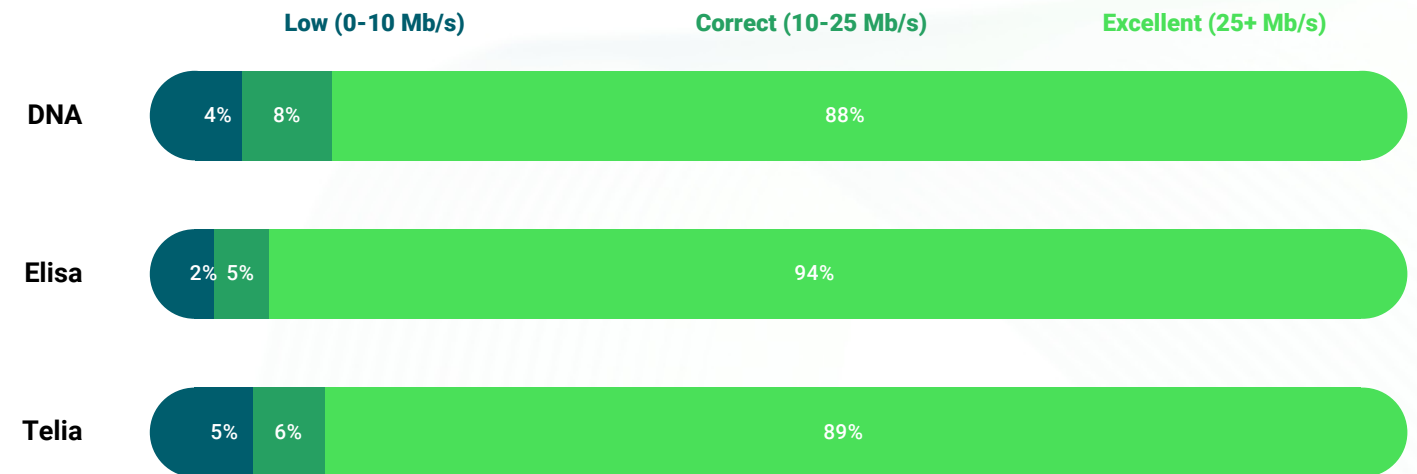
## Browsing Performance rate (average)



Source : nperf.com

The subscribers of Elisa enjoyed the best fixed Internet browsing performance in 2023.

## Browsing Performance results ventilation (average)



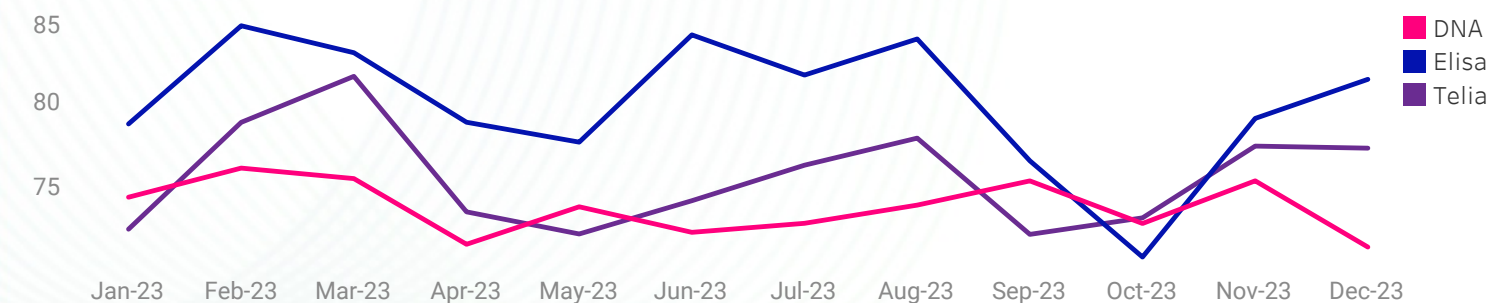
Source : nperf.com

## 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

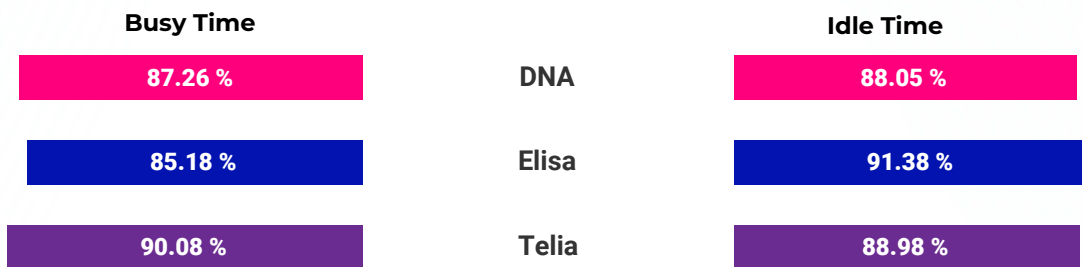
The subscribers of Elisa, DNA and DNA enjoyed the best fixed Internet streaming performance in 2023.

## Streaming Performance results ventilation (average)



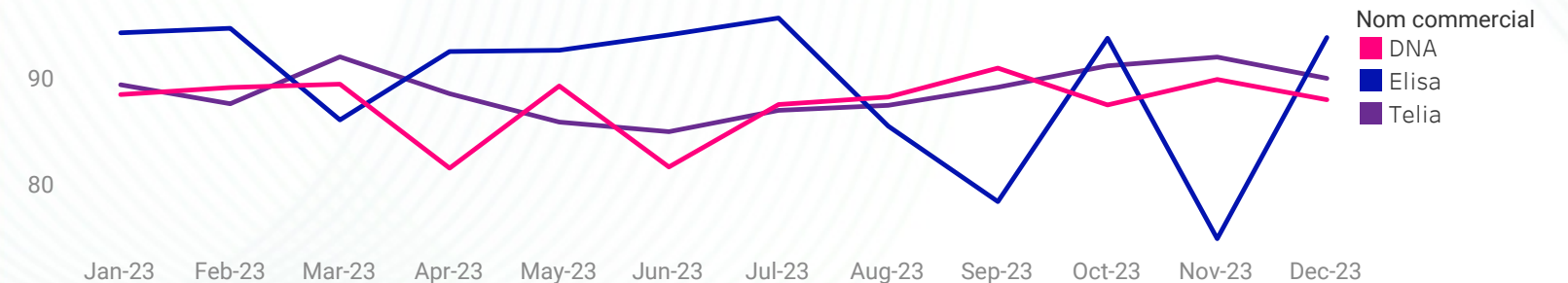
Source : nperf.com

## Streaming Performance rate (average)



Source : nperf.com

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

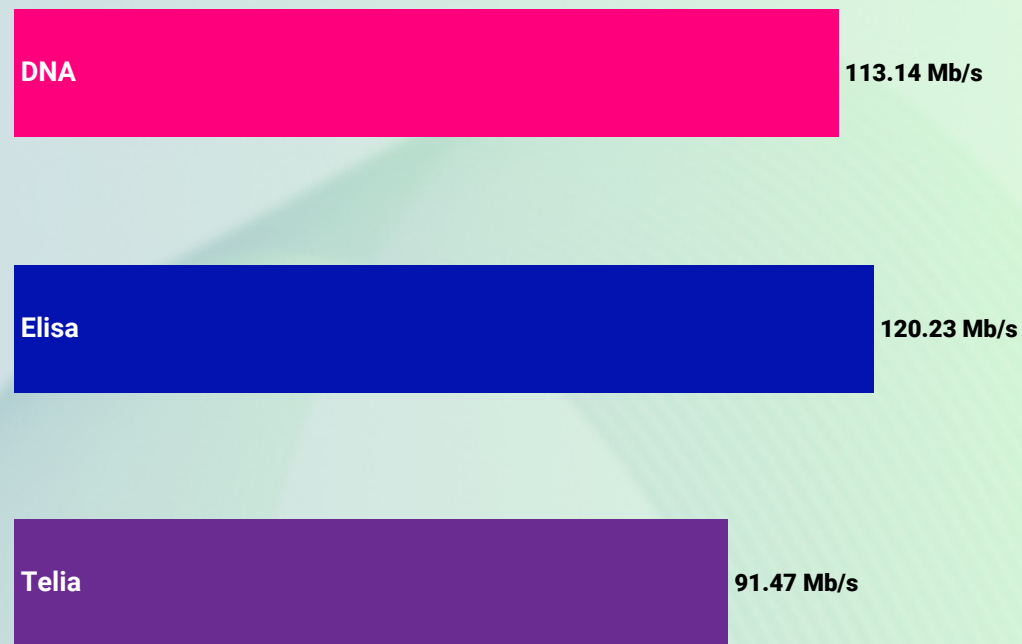


Source : nperf.com





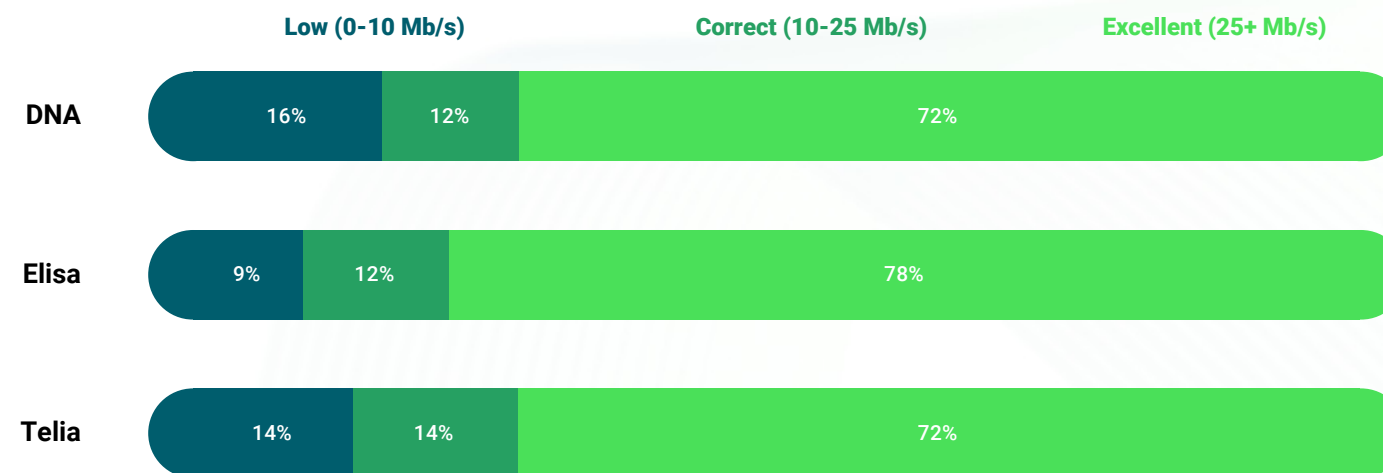
## Download Speed (average)



Source : nperf.com

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

## Download Speed results ventilation (average)



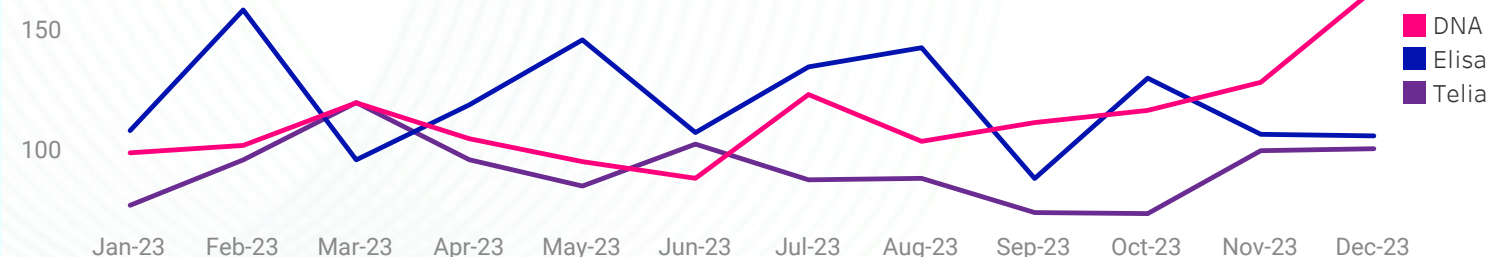
Source : nperf.com

## Download Speed (average)



Source : nperf.com

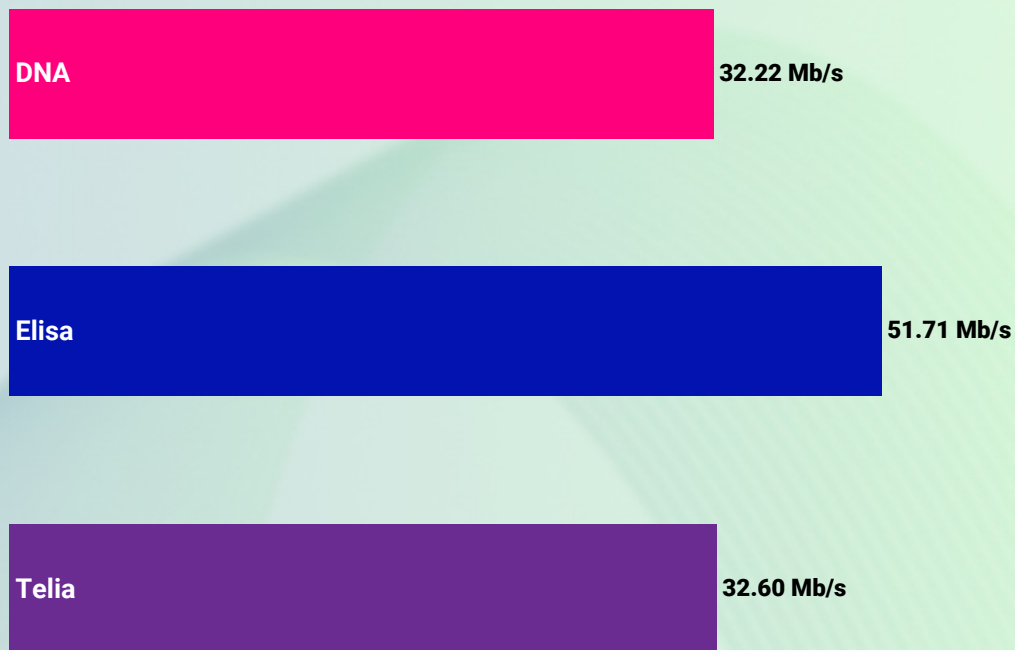
## Download Speed evolution over the year (average)



Source : nperf.com



## Upload Speed (average )



Source : nperf.com

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

## Upload Speed results ventilation (average)



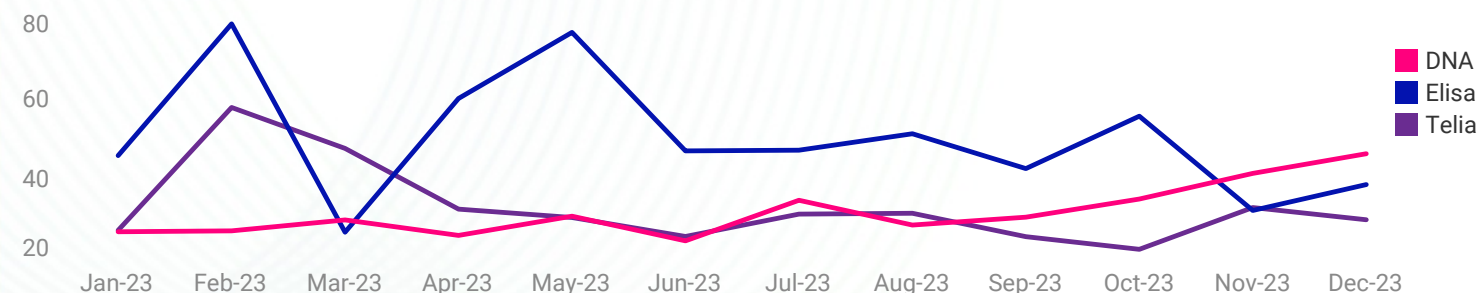
Source : nperf.com

## Upload Speed (average)



Source : nperf.com

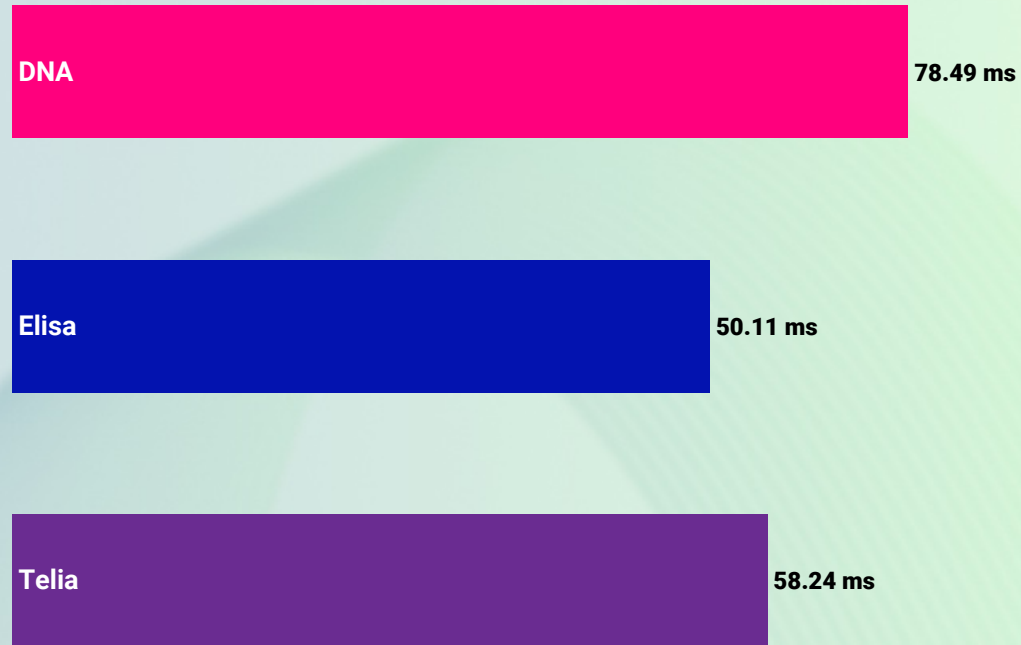
## Upload Speed evolution over the year (average)



Source : nperf.com



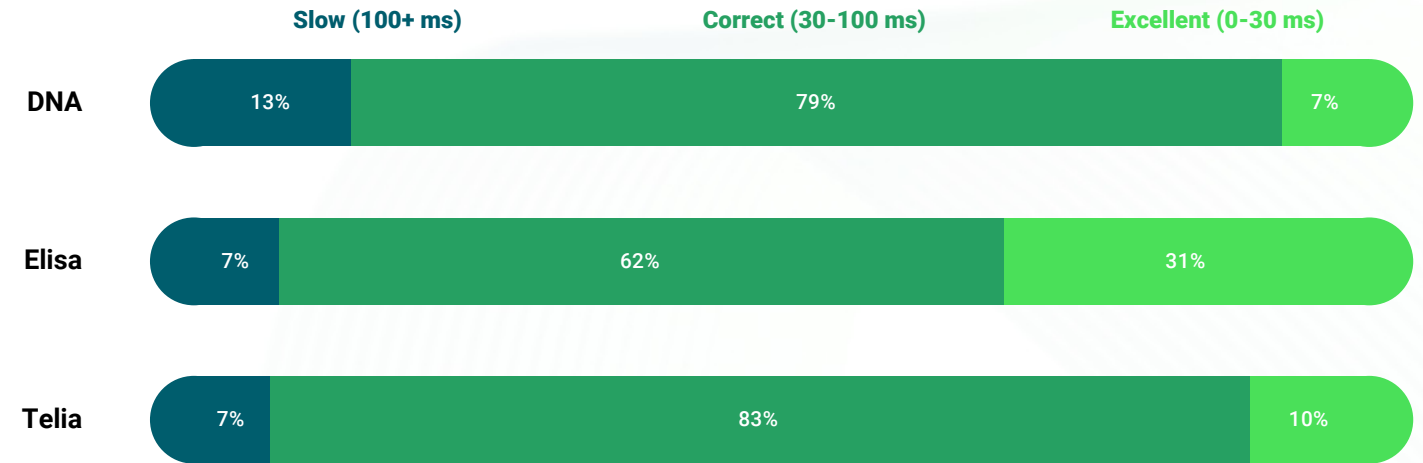
## Latency Speed (average)



Source : nperf.com

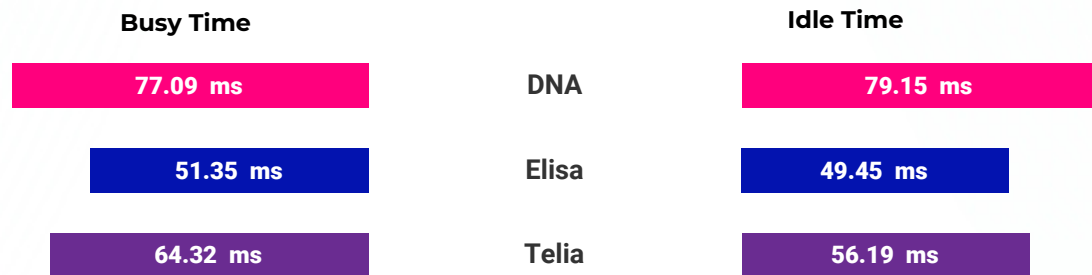
### The subscribers of Elisa enjoyed the best average broadband latency in 2023.

## Latency Speed results ventilation (average)



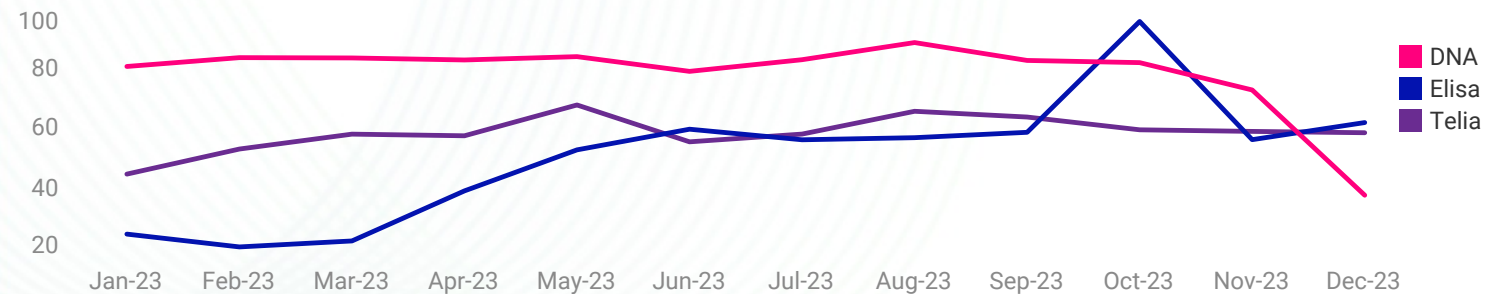
Source : nperf.com

## Latency Speed (average)



Source : nperf.com

## Average latency Speed evolution over the year



Source : nperf.com

## nPerf Score (nPoints)



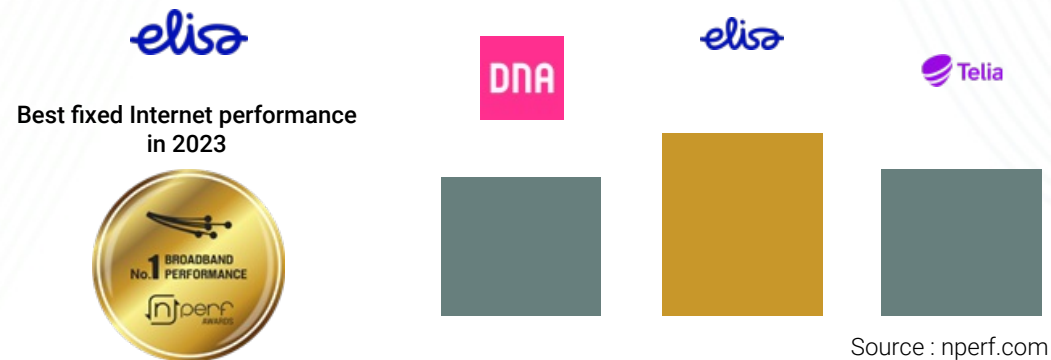
Source : nperf.com

The subscribers of Elisa enjoyed the best broadband performances in Finland during 2023.

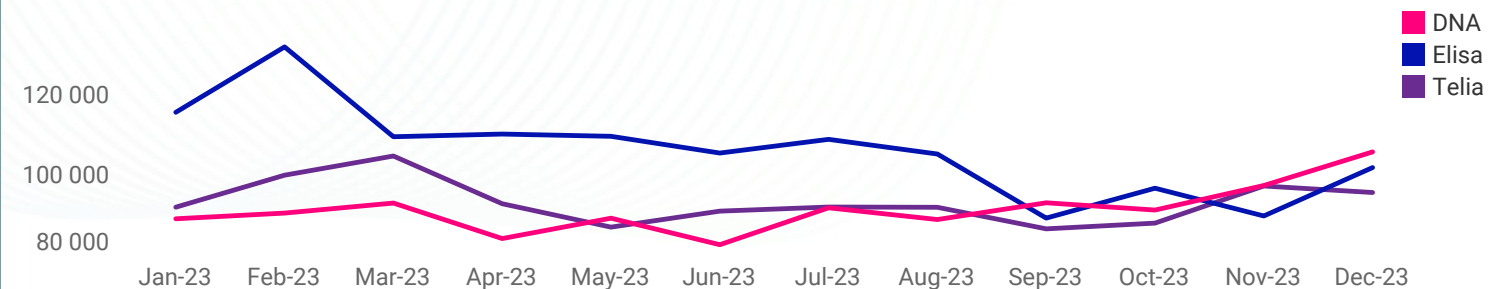
The nperf score takes into account the measured bitrates and the latency. The value of the points for the rates and the latency is calculated on a logarithmic scale, to better represent the perception of the user.

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

Source : nperf.com



## nPerf score evolution over the year (average)



Source : nperf.com



We qualify your connection