



# Noise Monitoring at Warsaw Chopin Airport

## Project Background

Since the 1990s, **Polish Airports State Enterprise (PPL)** – the operator of **Warsaw Chopin Airport** – has been legally required to monitor environmental noise resulting from airport operations. The environmental monitoring station, responsible for tracking aircraft and road traffic noise in and around the airport, plays a crucial role in complying with environmental regulations and protecting the health of nearby residents.

## Challenge

As the largest airport in Poland, Warsaw Chopin Airport handles over 50,000 flight operations annually. This intense activity poses significant challenges related to noise exposure for residents of Warsaw and neighboring municipalities. In accordance with Polish environmental law, PPL must regularly report accurate and verified noise data to regional authorities – requiring a **precise, reliable, and scalable monitoring solution**.



## Solution

As part of its long-term **noise management strategy**, PPL modernized its fixed noise monitoring system and updated its **strategic noise map** for Warsaw Chopin Airport. Additionally, in collaboration with **Far Data**, PPL implemented a **mobile noise monitoring platform** that includes:

- a low-profile trailer with stabilizing legs,
- a pneumatic telescopic mast with adjustable height (2–9 meters),
- a radar for automated traffic intensity measurement,
- a battery-powered energy system with onboard charger.

The goal of this mobile solution was to provide **flexibility in placing noise monitoring points** throughout the airport grounds and surrounding areas. Moreover, by measuring road traffic near the airport, the system allows operators to distinguish between noise generated by **vehicles** and that caused directly by **airport operations**.

## Results

With the use of modern monitoring technologies, **Warsaw Chopin Airport complies with all legal requirements** related to environmental noise. Regular reports are submitted to the **Marshal of the Mazowieckie Voivodeship** and the **Chief Inspectorate of Environmental Protection (GIOŚ)** – enabling transparent and responsible management of the airport's acoustic impact.

Despite high levels of air traffic, data analyses confirm that **outside the designated Noise Protection Zone**, noise levels remain within legal limits – effectively minimizing the impact on the local community.



## Conclusion

Noise monitoring at Warsaw Chopin Airport serves as a model for **responsible management of environmental impacts** associated with aviation infrastructure. Through the use of advanced technologies and collaboration with specialized partners like **Far Data**, PPL not only meets regulatory obligations but also actively contributes to protecting public health and supporting the **sustainable development** of airport operations.



