

Deployment of Mobile Environmental Monitoring Platforms for City Offices and Research Institutions

Client

Warsaw City Hall, Wrocław City Hall, City of Stalowa Wola, City of Mielec, Chief Inspectorate of Environmental Protection / Voivodeship Inspectorates (Jelenia Góra, Lublin, Kraków, Łódź, Kielce), Cracow University of Technology.

Challenge

With the growing number of traffic-intensive and industrial zones across Poland, there was an urgent need to monitor **air quality and environmental noise** in a flexible and location-independent way. Traditional fixed monitoring stations, while accurate, proved costly and lacked the adaptability needed to respond to dynamic urban and environmental challenges.



Solution

To address this issue, **Far Data Sp. z o.o.** delivered a fleet of **mobile monitoring platforms** built on **CARGO-type trailers**. Each platform was equipped with:

- a **pneumatic telescopic mast** adjustable from 2 to 11 meters,
- a **radar** for automatic traffic volume measurement,
- **stations for air quality and noise monitoring**,
- **meteorological sensors**,
- **video cameras**,
- and a **battery-powered energy system with onboard charger** for autonomous operation.

Implementation Outcomes

1. Warsaw and Wrocław

Mobile platforms enabled accurate measurement of pollutants across different parts of the metropolitan area. The ability to reposition stations allowed cities to monitor high-risk areas for **noise exceedances** and supported the creation and verification of **mandatory acoustic maps** required for urban areas with over 250,000 residents.

2. Stalowa Wola and Mielec

In smaller cities, the platforms were deployed near industrial facilities to monitor air quality. Long-term localized measurements provided municipal authorities with credible data, supporting policy decisions and enhancing residents' quality of life.



3. Environmental Protection Inspectorates (GIOŚ/WIOŚ)

In regions such as Jelenia Góra, Lublin, Kraków, Łódź, and Kielce, the mobile platforms gave inspectors the **flexibility to perform on-demand monitoring** across multiple locations, significantly improving regional **environmental oversight**.

4. Cracow University of Technology

The university used the mobile lab for both **advanced environmental research and educational purposes**. With real-time data access, students and researchers could analyze environmental conditions live, making the platform a valuable tool for teaching and applied science.

Conclusion

The deployment of mobile environmental monitoring platforms based on trailer systems proved to be a **strategic and effective solution** for both public administration and academic institutions. These platforms deliver **reliable, flexible, and comprehensive** environmental monitoring – enabling fast responses to pollution exceedances and supporting data-driven decisions.

The initiative earned recognition from both **local communities and environmental professionals**, showing how mobility and precision can enhance environmental protection in a wide range of urban and regional contexts.







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