

AI-driven environmental data analysis

T-Systems supported the project with AI expertise, system integration, and cloud operations, working with Remondis to upgrade their platform and enhance image processing capabilities.

The challenge

Environmental data helps cities identify dirty traffic signs, graffiti, wild growth, and illegal waste dumping using cameras on waste disposal vehicles. Varying image quality due to weather, time of day, insufficient GPS data, motion blur, white balance issues, and image noise, complicate data accuracy. The need for real-time data processing and scalability further adds to the complexity.

The solution

The solution involved equipping waste collection vehicles system, which includes an edge device, camera, GPS, and WiFi antenna. The city areas are driven at regular intervals, during which the street environment data is collected, georeferenced, and anonymized. The data is transmitted to a cloud-based database for processing. A web-based dashboard allows for data management and analysis.

The result

Leveraging an AI-based data collection system eliminated the need for manual data collection, enhancing efficiency. Implemented in multiple cities, it improved cleanliness, and urban processes. Customer satisfaction increased due to higher data quality and the use of cloud scalability for efficient processing and resource management.

“ We’ve significantly improved efficiency by eliminating manual data collection. Despite challenges like varying image quality and GPS data issues, the AI-based system’s real-time processing and scalability will have a huge impact on city cleanliness, and overall urban processes. ”

Duc Truong, Lead Data Scientist, Remondis Digital Services



WORKING FOR THE FUTURE

About Remondis Digital Services

Remondis Digital develops innovative digital solutions for the circular economy. Their goal is to facilitate everyday tasks and promote sustainability through technology. Focusing on creating value-added services for industry, waste management companies, and municipalities, their innovation hub drives product development to market readiness.

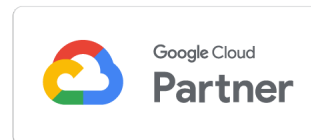
Vertical/horizontal solution: Business & Professional Services

Primary project location: Germany



About T-Systems International GmbH

With individual multi- hybrid-cloud solutions, we offer opportunities for more growth and sovereignty in the development of new business models.



Products

Google Cloud Platform