

IMPACT CASE

Smart city: Reduction of carbon emissions through smart construction lights



CASE

The city **Hamburg**, Germany required a way to **track** the vast amount of road construction projects (**>10.000 construction lights annually**) throughout the city. The underlying goal was to improve planning and traffic management, thereby **reducing carbon emissions**.

The city founded the project „**GeoNetBake**“, calling for **smart construction lights** that could help to achieve its goal while also providing valuable real time construction data that currently does not exist but is vital for many smart city solutions.

SOLUTION

The aim of the smart construction lights is to capture construction site information **digitally and automatically**. For this purpose, **geo-referential, sensor-supported** construction lights record information with the help of **AI**, including the **specific location, direction of travel and the surrounding of the road construction site** in near real time. The data stream is aggregated and displayed on the **Urban Data Platform** and can be provided to other organizations (e.g. navigation data provider).

FORECAST

A complete image of the current state of construction sites eliminates the need for regular check-ups, saving resources and improving road safety.

Furthermore, the **data can be combined** to create valuable insights for autonomous cars or rescue vehicles who now know the exact dimensions of constructions sites, further **improving safety**.

In the future, ultra precise construction data can be combined with traffic flow analysis and smart traffic lights to improve traffic as well as **short and long term city planning**.

COLLABORATION



LSBG
Landesbetrieb Straßen,
Brücken und Gewässer
Hamburg

INNOVATION AREA

- **Future Mobility & Cities**
- **Resource Efficiency**

IMPACT MEASUREMENT

- **Reduction of emissions through access to real time data, less frequent on-site check ups and transparent data aggregation**

IMPACT VISION 2030

- **Make precise positioning data accessible for everyone**
- **Eliminate in-person check-ups on construction sites**
- **Reduce construction impact on traffic flow**