

Zero-emission goal: how to track pollution in real time?

Real-Time Carbon Emission Monitoring

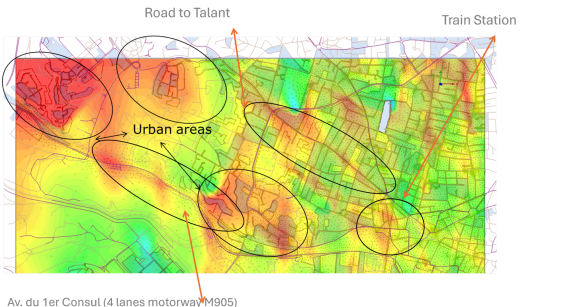
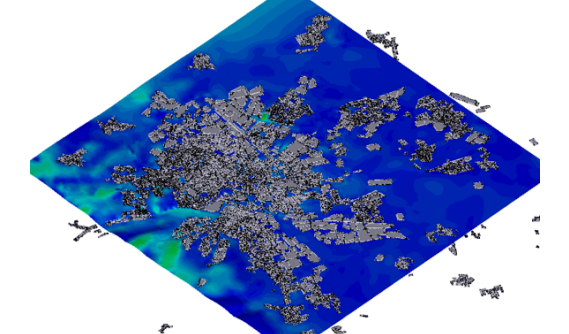
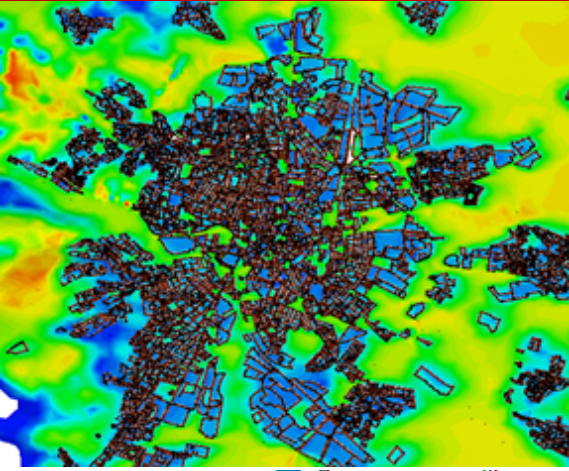
To meet the goals of the **Paris Agreement**, cities and industries need fast and affordable monitoring of greenhouse gas emissions. FLUIDYN's **SENSORMAP** transforms direct CO₂ measurements into city-scale emission maps updated every hour.. Already tested in Dijon, it combines on-site sensors, meteorological data, and air circulation models to track pollution down to street level and identify key emission sources such as transport, buildings, and biogenic activity.

With real-time results, it provides residents and decision-makers with a practical, operational tool that complements traditional annual inventories. This enables more accurate tracking of progress in CO₂ reduction and supports the transition towards carbon neutrality.

Towards Better Methane Leak Detection to Protect the Climate

In October 2024, **FLUIDYN** conducted an experimental study in France for real-time methane leak detection. During this study, 25 methane sensors using three different technologies were deployed at a pilot site operated by a gas company.

The goal was to test the performance of the sensors and the ability of the modeling tools to locate and characterize leaks. By focusing on several key periods during the experiment days, the study produced maps showing leak areas accurately on a minute-by-minute basis. These results obtained under real meteorological conditions, confirm the effectiveness of the sensor network and the methods used.



Fluidyn recently participated in **HARMO 23, HAMBURG**, presenting two papers:

- 1. *“Coupling CFD flow and dispersion model with renormalisation theory for in situ data inversion”*, applied to real-time CO₂ mapping in the city of Dijon, France.
- 2. *“CFD model predictions comparison with the Jack Rabbit II experimental cases of chlorine dispersion”*, studying a chlorine release on a flat desert location at Dugway Proving Ground, Utah, USA.

These presentations highlighted how advanced modelling and data inversion can improve emissions monitoring and support urban and industrial efforts toward net zero targets.

Meet us at **Pollutec** on the stand **G082 - Hall 5** to learn more !

pollutec

7-10 OCT. 2025

LYON EUREXPO FRANCE

where the sustainable world is invented

Fluidyn will be at Pollutec to showcase our inversion modelling tool, showing how real-time emission source mapping works and its potential to guide informed climate action. Visit us to learn how this innovation can support cities and industries on their path to net zero.

Meet us at **WNE (World Nuclear Exhibition)** in November on the stand **C001**

WNE

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WE EXHIBIT AT WNE 2025

The world's largest civil nuclear exhibition

Exhibition Center - Villepinte / Paris - Hall 6

Meet us at WNE!

Fluidyn will be at WNE from 4–6 November, where we will present our innovative tools for the civil nuclear energy sector—covering nuclear safety, ventilation, optimizing reactor processes, managing radioactive dispersion, handling radioactive waste, reducing environmental footprint, and promoting nuclear energy as a solution to cut greenhouse gas emissions.

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