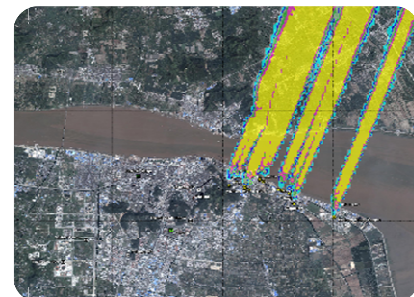


EPA - China

The first online air quality monitoring network
for a 27 km² industrial area

The monitored area

- Situated south of Shanghai, in Zhejiang province
- Heavily industrialized area
- Main activity: fine chemicals
- 10 plants under surveillance, under the authority of the Chinese governmental agency for environmental protection (EPA)



Dynamic « odor » map

Challenges

- To respond to the environmental monitoring strategy launched by the Chinese government
- To monitor the levels of odor and gas pollutant emissions from many industrial sites in the pilot province of Zhejiang, before considering a larger scale deployment
- To evaluate the contribution of each site in terms of the impact on the neighborhood: odor, VOC, H₂S, NH₃

Solution

RQ Box Anywhere solution including:

- 20 RQ Box electronic noses
 - 15 noses installed on industrial chimneys. At each measurement point, sampling, drying and effluent dilution is provided by a DnD (Dry and Dilute) sampler, located upstream of the RQ Box analyzer.
 - 5 noses placed at different points of interest, outside of the industrial sites: schools, etc.
- a network of 4 weather stations
- an Ethernet communication system and a web server for the centralization of data
- a web site with secure access for remote access to results
- 4D atmospheric dispersion modeling software



Results

- **Remote monitoring of multiple sites in real time**
 - ⇒ Continuous emission measurements, on each site: odor (ou.m⁻³), VOC, NH₃, H₂S (ppm)
 - ⇒ Dynamic dispersion maps by pollutant: taking into account the emissions from each site, the meteorological parameters recorded in real time and the local topography
 - ⇒ Centralized data accessible by Internet : each site accesses its own data, the Chinese environmental agency accesses data from all sites
- **Equipment designed for all types of emission sources**
 - ⇒ Sampling /drying /dilution device specially designed for channeled flows
 - ⇒ Sampling device integrated into the analyzer for other types of sources
- **A flexible and scalable solution**
 - ⇒ Results displayed in the users language and according to his profile
 - ⇒ Rapid expansion of the monitored area by adding additional analyzers
 - ⇒ Simplified management of access to results through web technology