



# NOSE PLATFORM<sup>®</sup>

*REAL-TIME MONITORING OF ODOUR IMPACT*

ARIA TECHNOLOGIES – 25 YEARS

December 2015

ready for the resource revolution



# ODOUR MANAGEMENT

## *Project drivers & value proposition*

**Integration of industrial sites within urban environment**

**Increasing trend to limit nuisance odours**

**Holistic benefits evolution from pure risk management**

- Regulatory compliance & contractual guarantees
- Safe working environment
- Enhanced quality of life
- Reduced environmental footprint
- Improved corporate image
- Comprehensive communication strategy

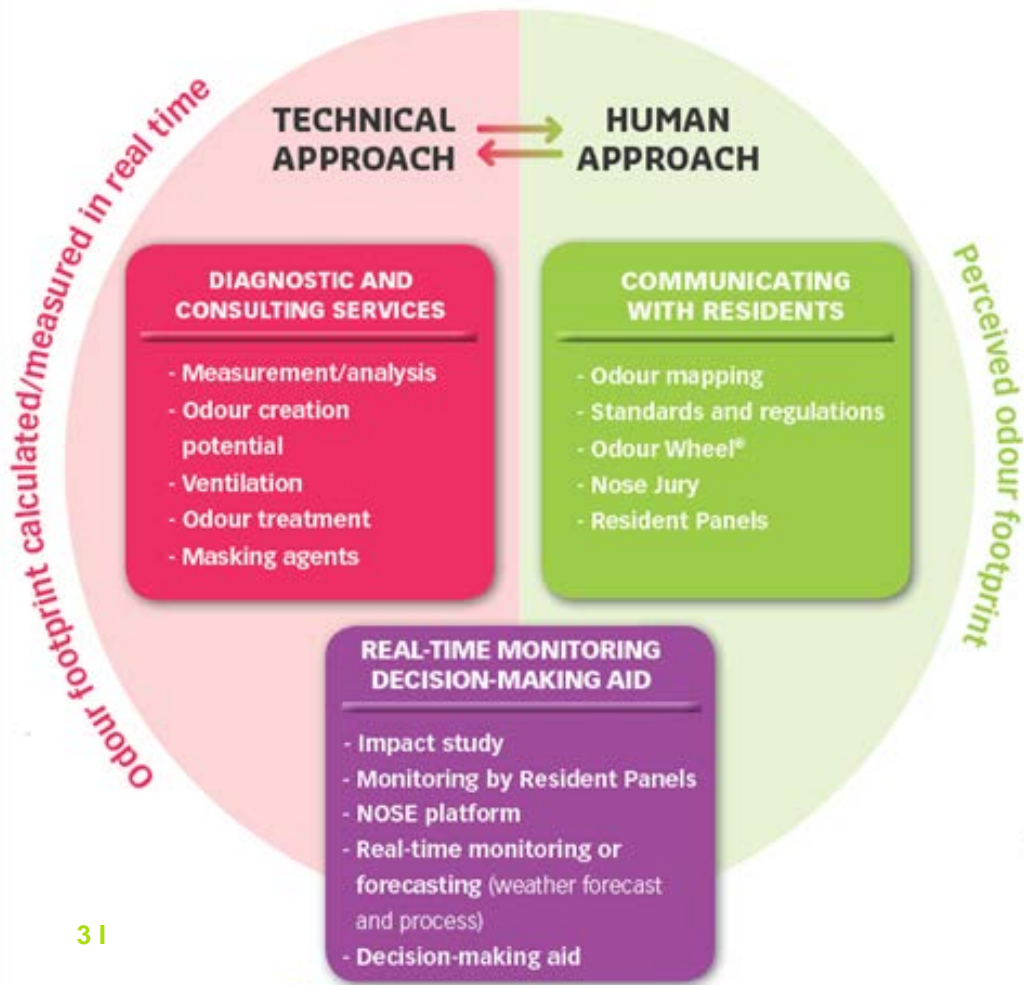




# ODOUR MANAGEMENT

## *Development of a sustainable strategy*

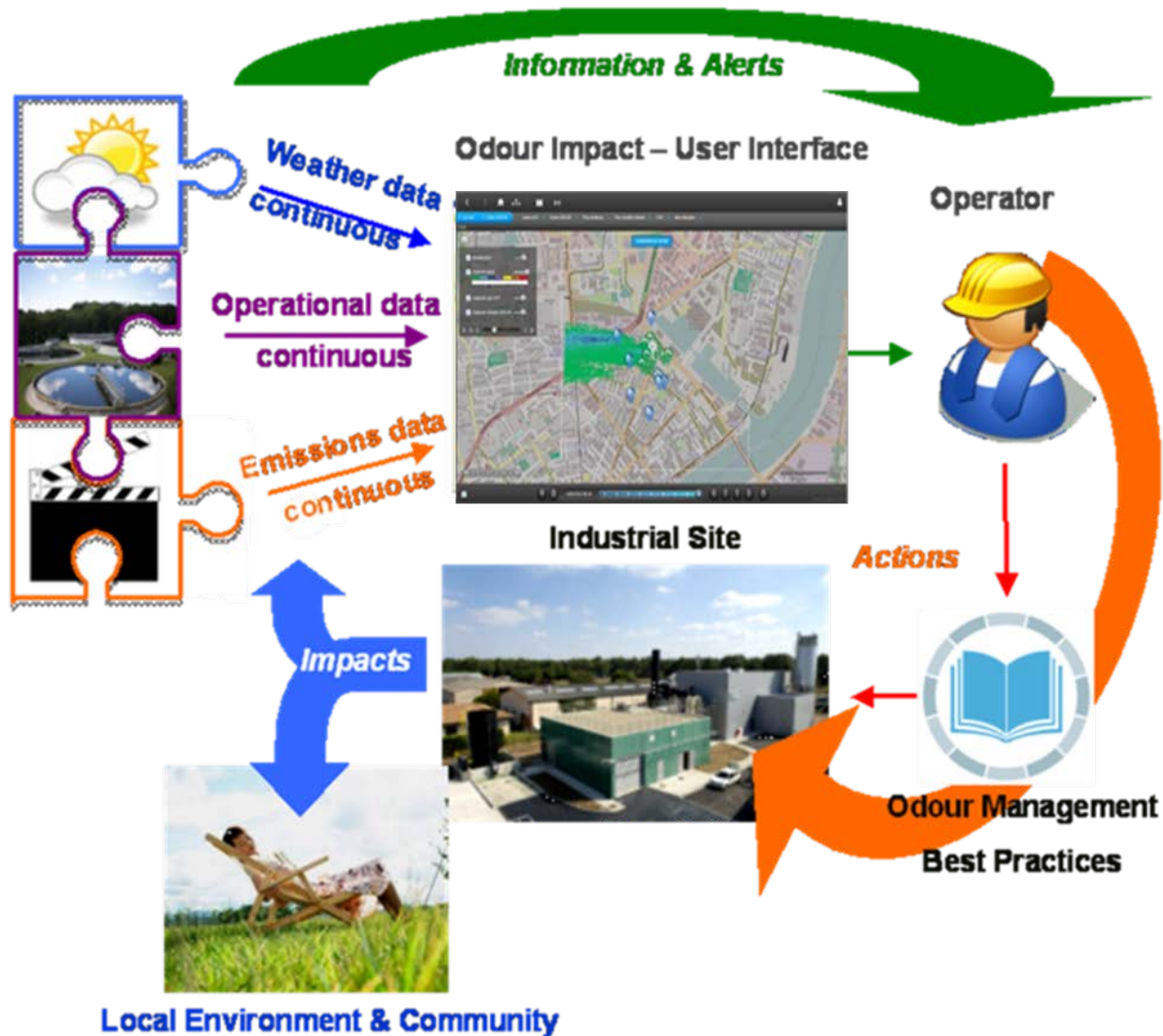
Provide industrial site operators with a global strategy for odour management related to their activities



- Implement curative solutions
- Facilitate stakeholder communications
- Prevent nuisance odour crises

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## Real-time monitoring of nuisance odours



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## *Industrialization strategy*

**Creation of standard product line**

**Definition of functional specifications & associated technical solutions**

**Establish preferred partner agreements**

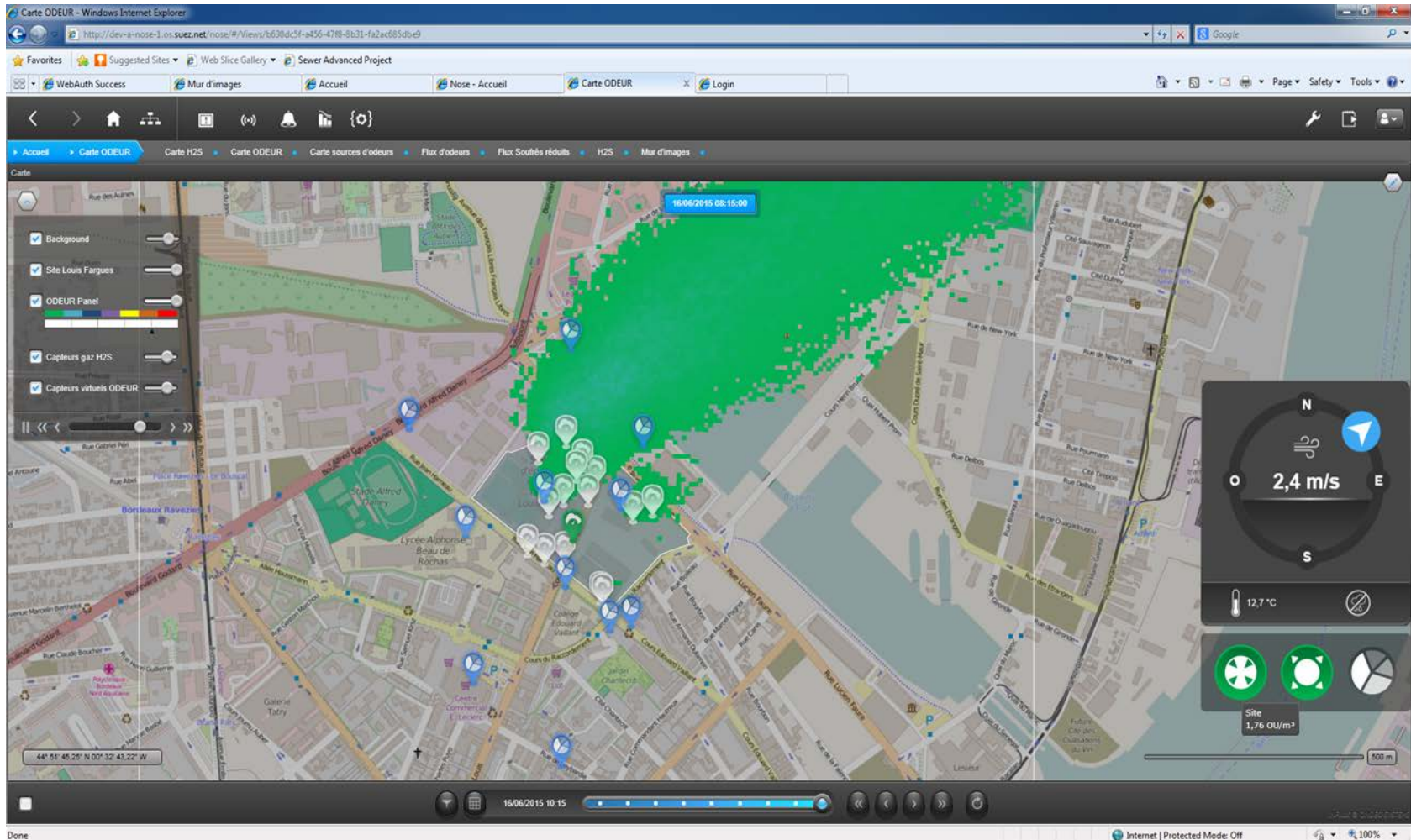
- ARIA Technologies – ARIA View™ atmospheric dispersion model
- CAIRPOL – sensor technology
- Ondeo Systems – proprietary HMI





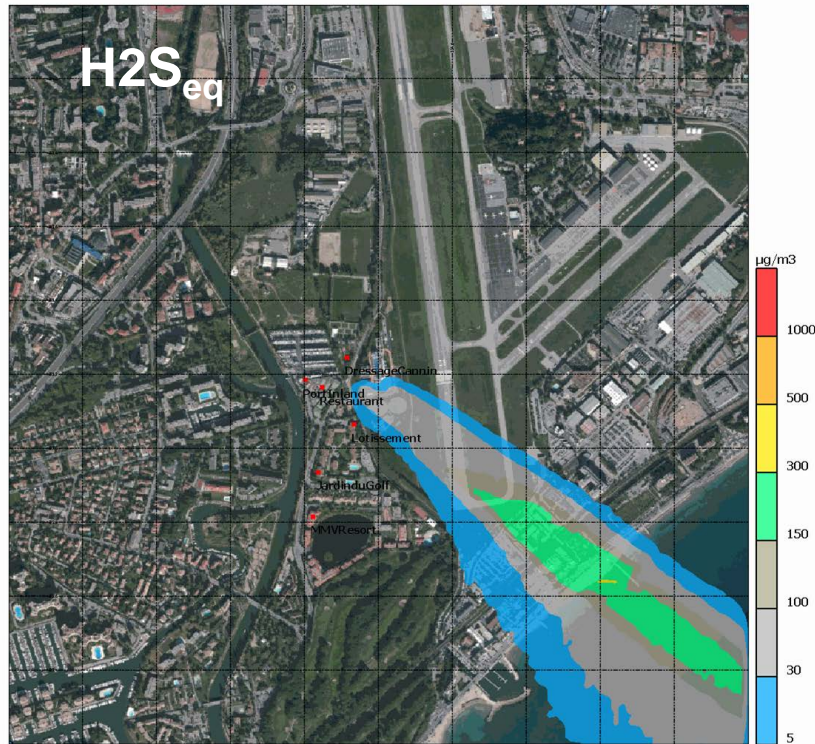
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## Real-time monitoring of nuisance odour emissions

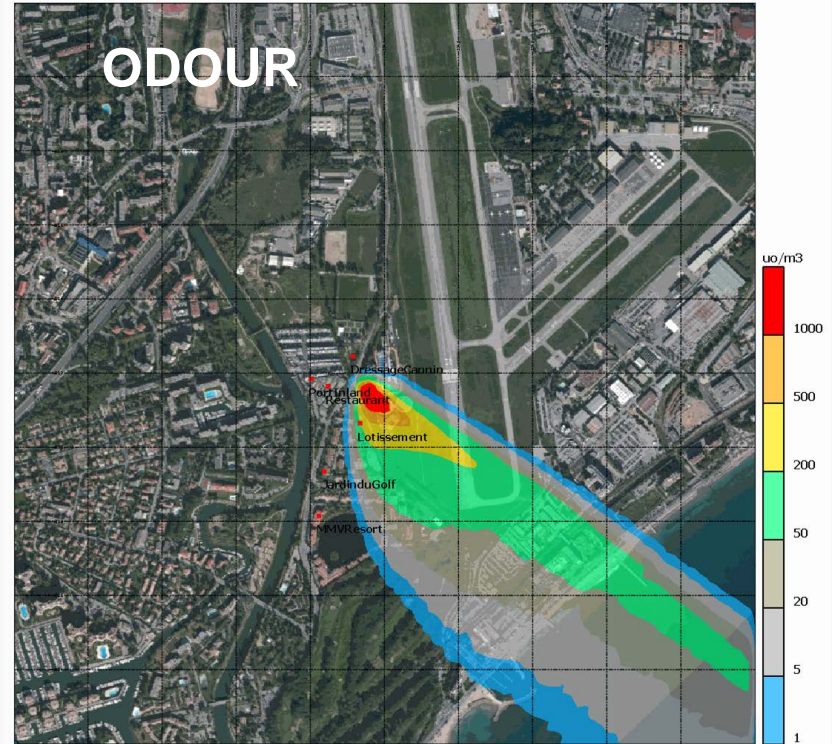


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## Real-time odour impact assessment



routine  
Site Aquaviva - Cannes  
Date 13/06/2014 00:30 Max : 319 mcg/m3



routine  
Site Aquaviva - Cannes  
Date 13/06/2014 00:30 Max : 4167 uo/m3



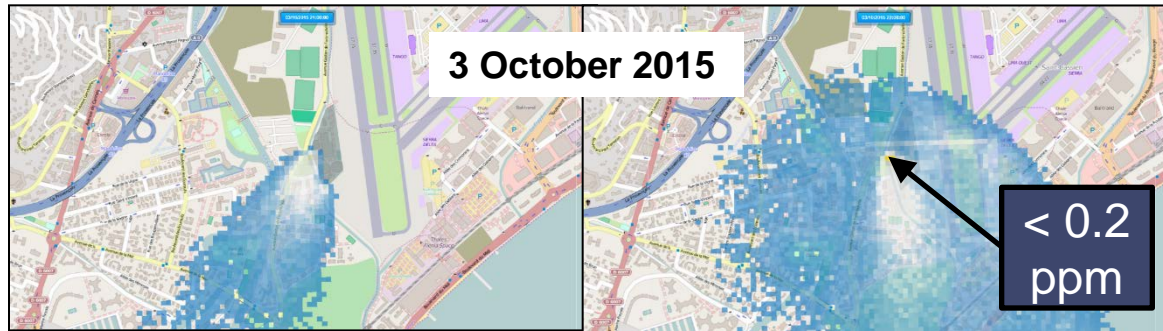
Odour impact modelling (mg/m<sup>3</sup> H2S<sub>eq</sub> and OU/m<sup>3</sup>)



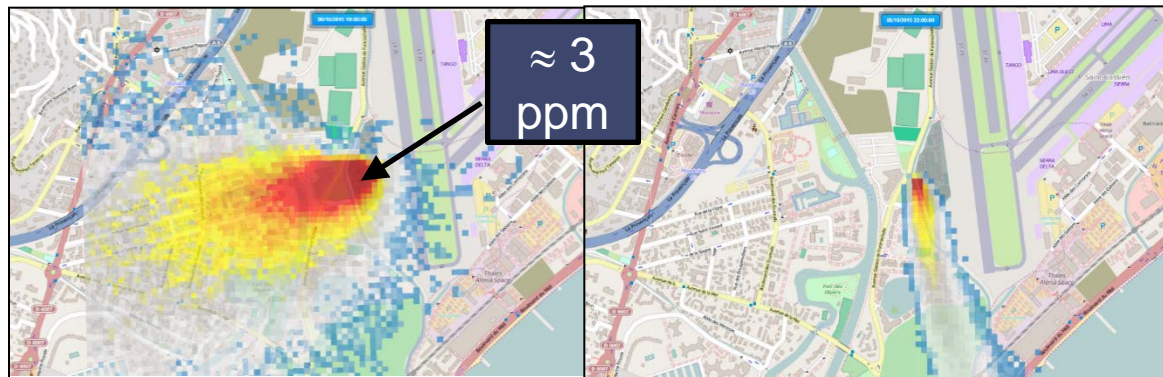
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## *Real-time odour impact assessment*

Before the storm, under normal conditions, low H<sub>2</sub>S emissions



48 hours after the storm, high H<sub>2</sub>S emissions

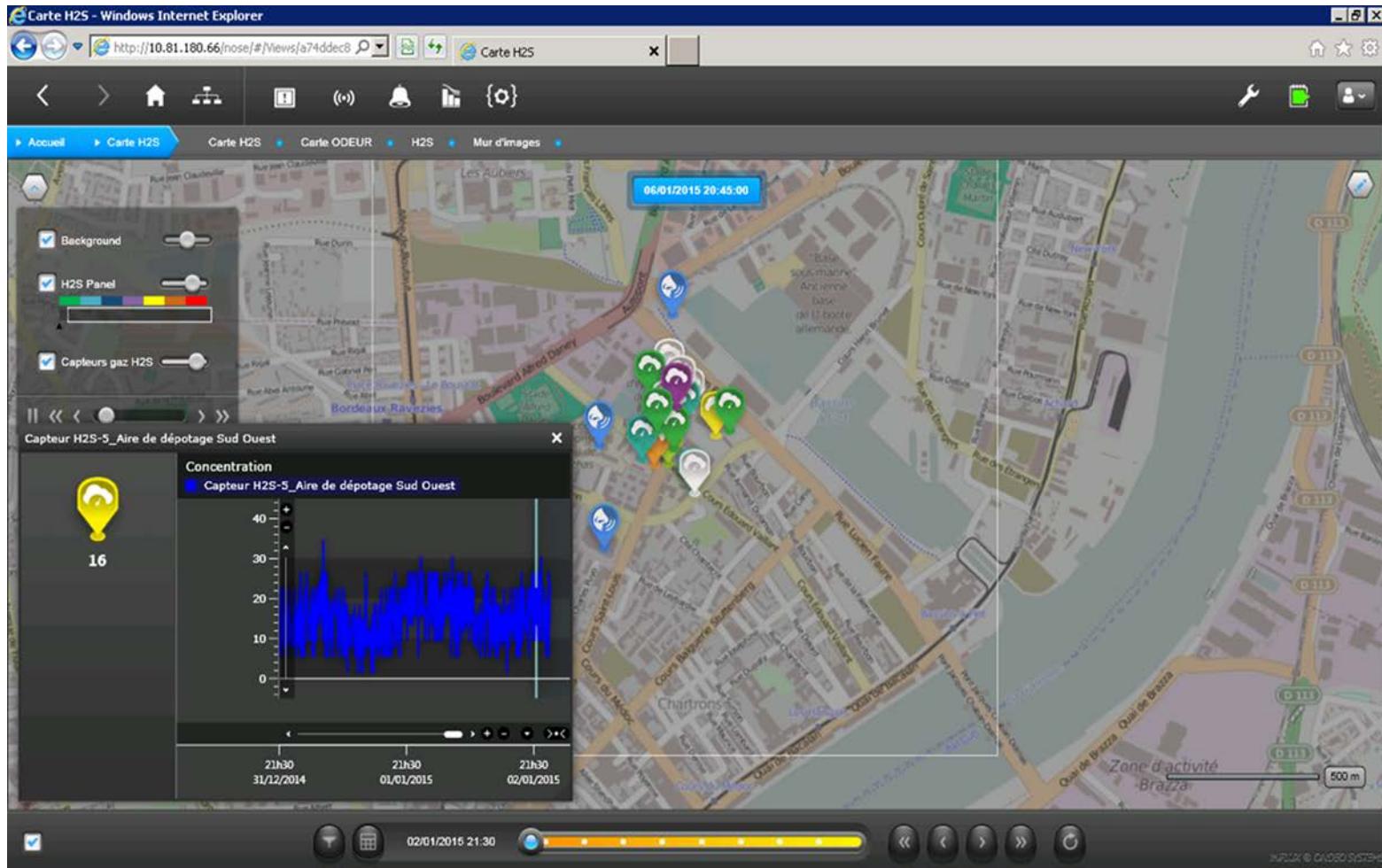


Top Priorities: Inform Local Residents / Re-establish Normal Operations



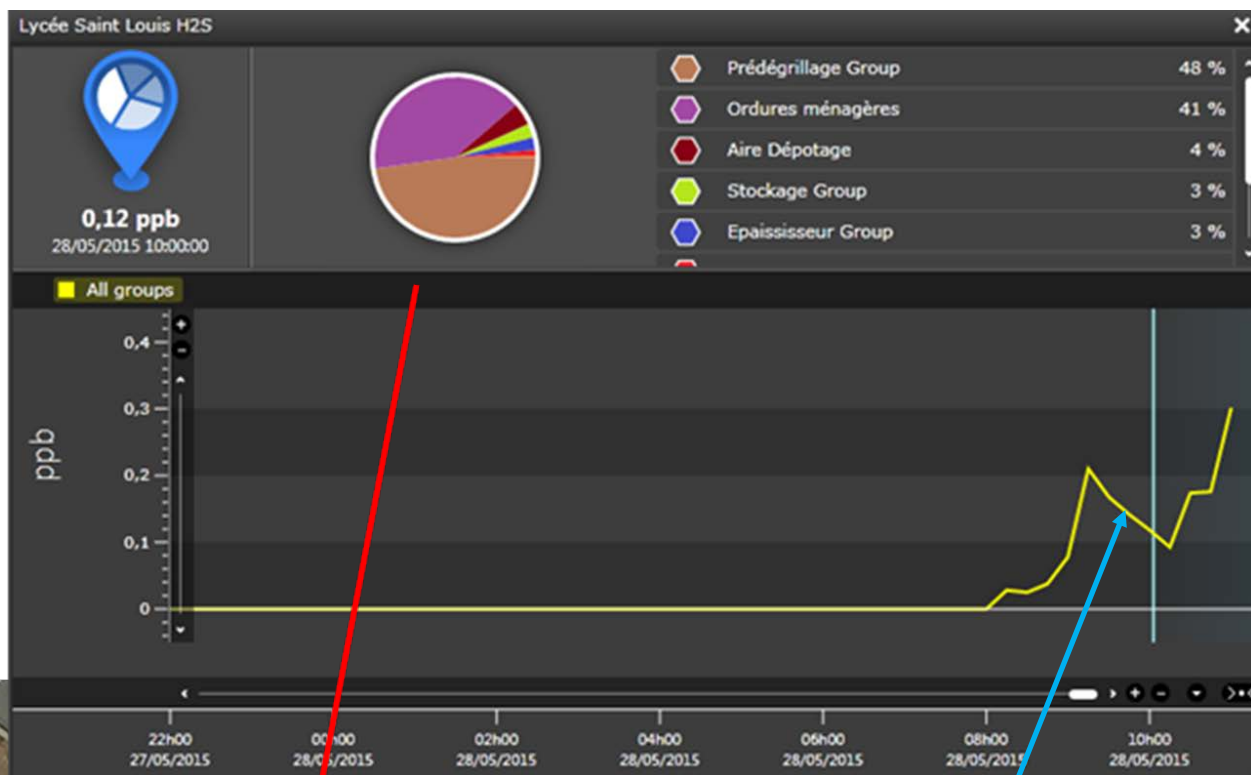
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## Real-time monitoring of ambient air sensor data



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## Odour source contribution



H2S concentration  
calculated at  
Reception Point

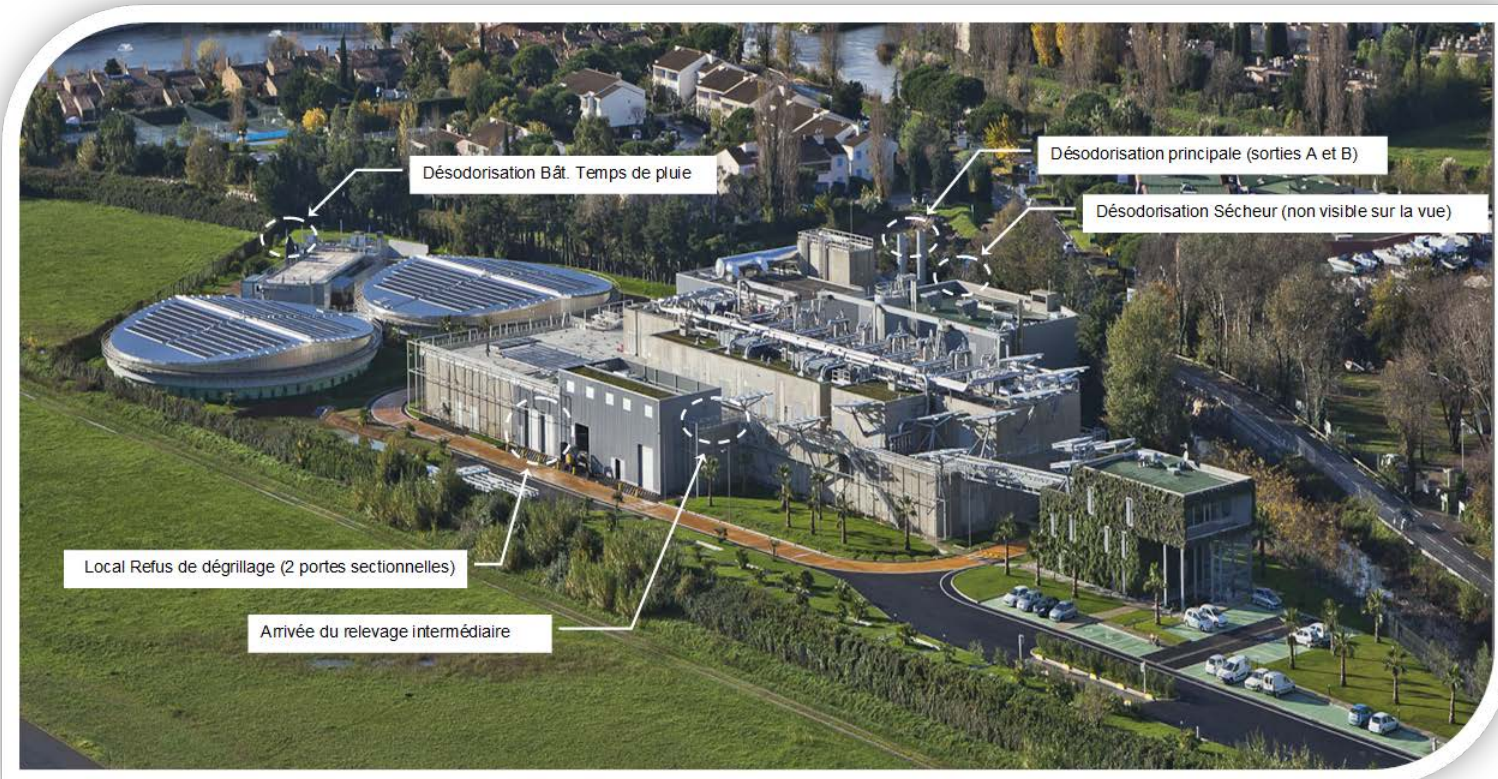


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## AQUAVIVA WWTP – Cannes, FRANCE

A new WWTP on the French Riviera (2011 commissioning; 300 000 PE)

Expectations of very high performance, **advanced treatment and energy efficiency.**  
**Focus on community integration** : visual aspects and **olfactory comfort to protect international brand & local tourism industry.**



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## *Louis Fargue WWTP – Bordeaux, FRANCE*

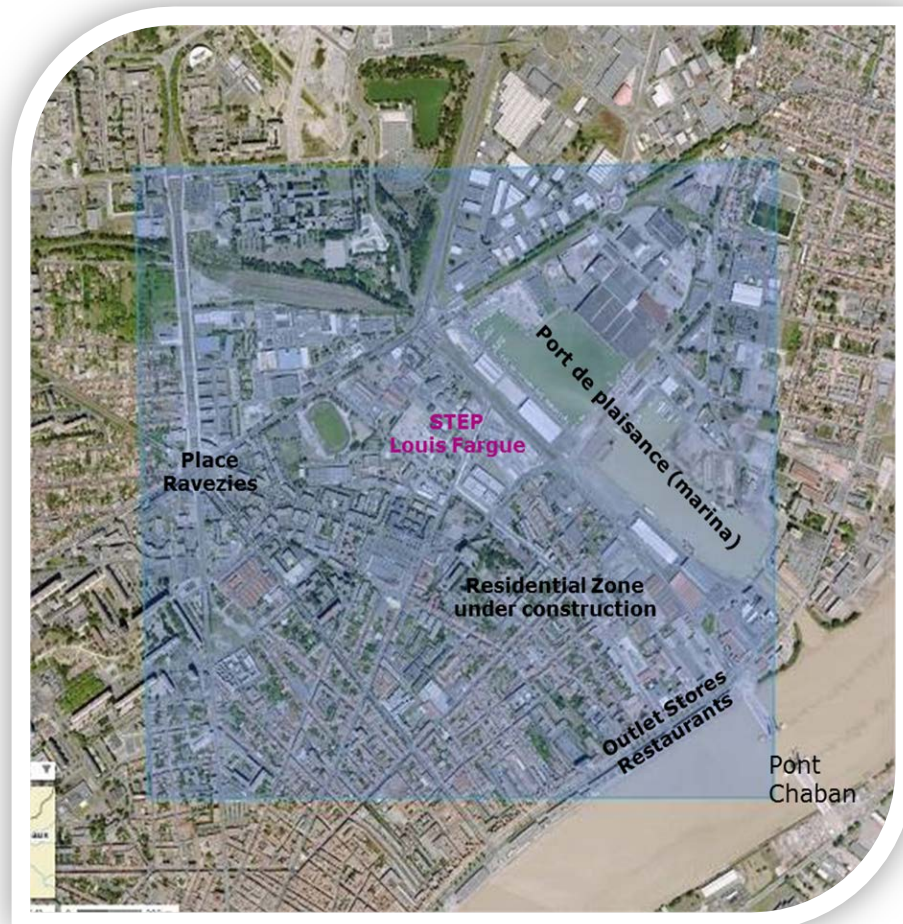
### WWTP Upgrade (2011 commissioning; 367 000 PE)

#### Project Rationale – Urban Development Plan

- Target 30% population increase within 5 years
- Significant impact on population density
- « Zero Nuisance » WWTP Operations

#### Sensor Network Installation

- 12 sensors monitoring ambient air locations
- 4 sensors monitoring odour control system outlets





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## *Nassau County – Long Island (NY), USA*

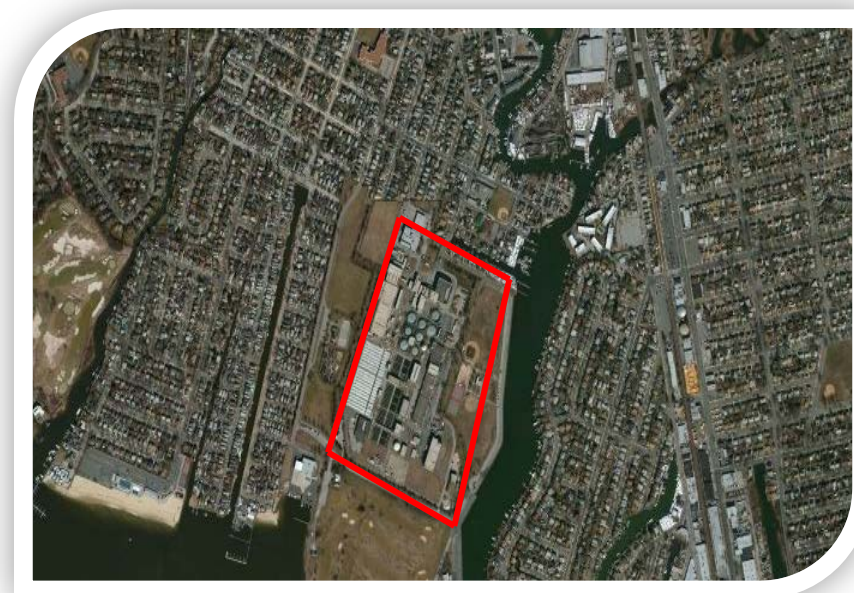
3 WWTPs (21 to 265 MLD)

### Project Rationale – Regulatory Focus

- Plant Operations Management & Local Authority sought tangible basis for « odour monitoring » guidelines
- Agreement to use  $H_2S_{eq}$  concentration at facility perimeter via use of on-line micro-sensor network

### Sensor Network Installation

- 10 sensors per site monitoring ambient air locations
- 2 sensors per site monitoring Odour Abatement outlets

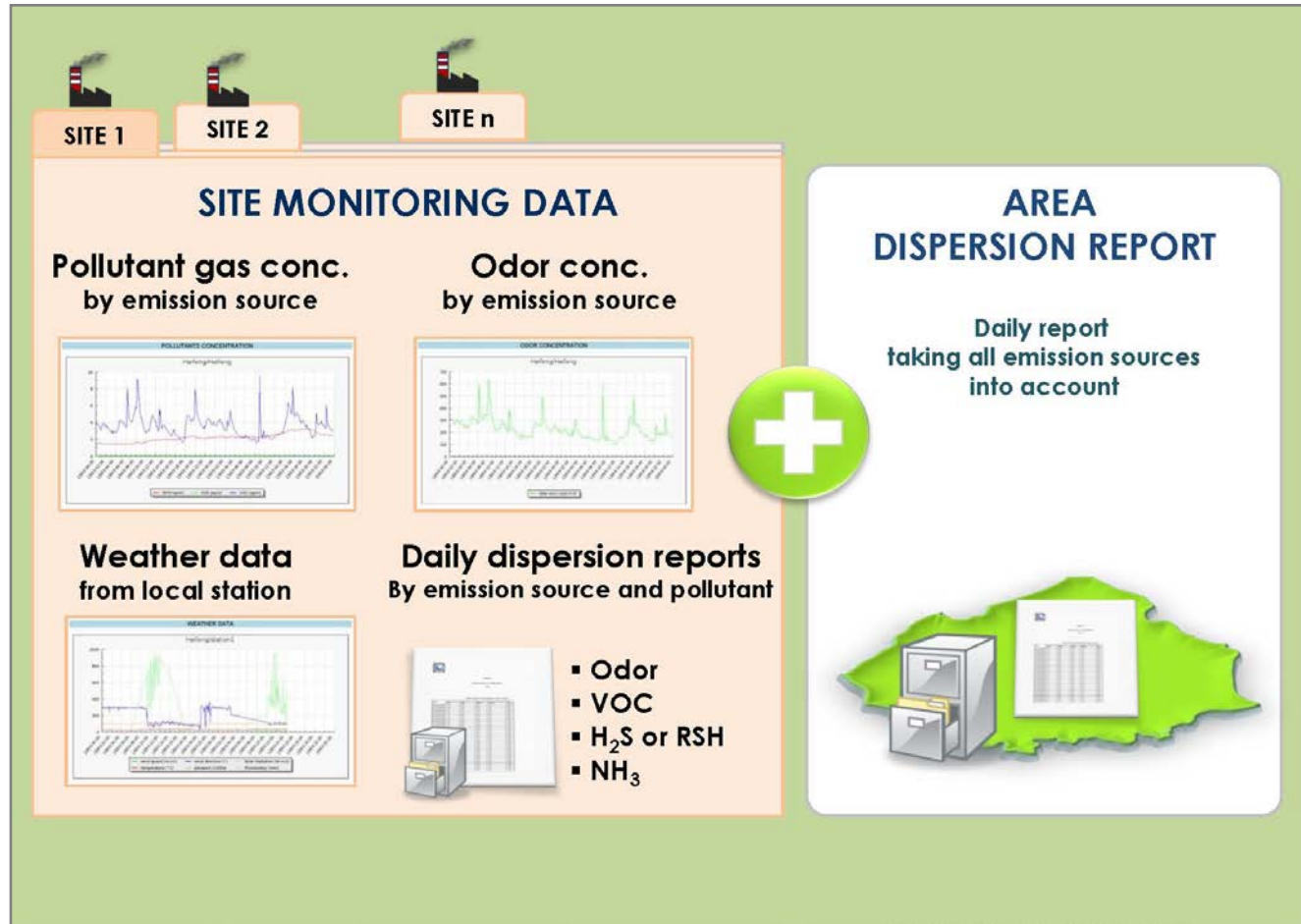


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## Multi-site functionality



Regional  
Monitoring  
Center





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## *Client benefits*

### **Integration of industrial sites within local community**

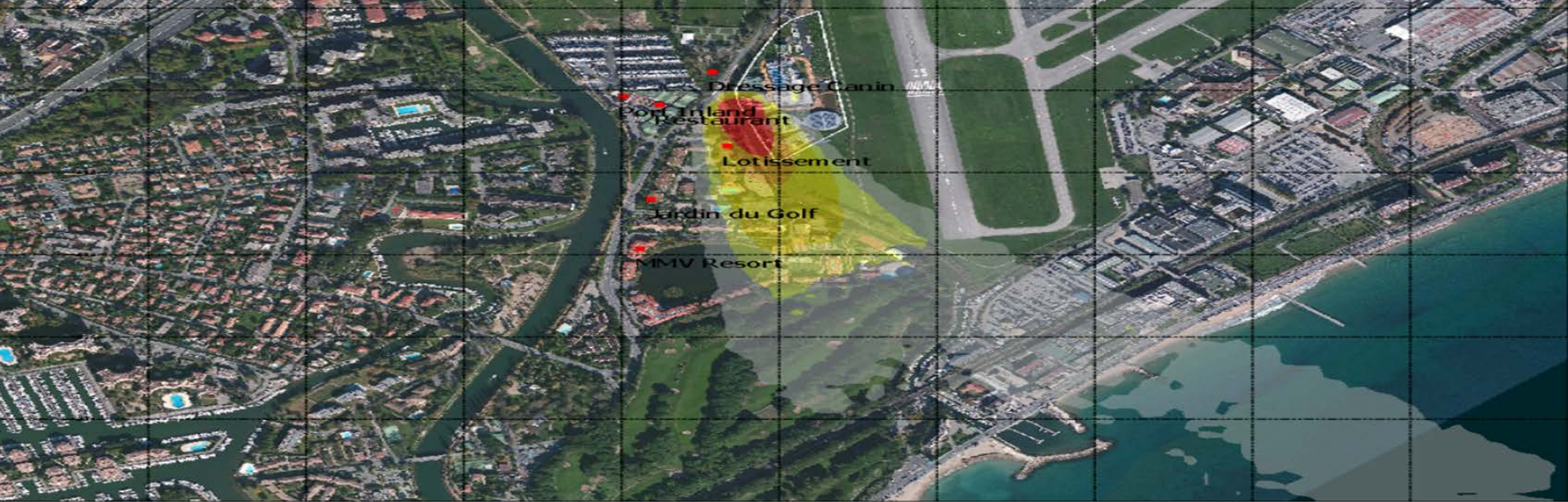
- Reduced complaints – productivity enhancement and focus on core operations
- Facilitate operational diagnostics & rapid response
- Eliminate barriers to potential growth & production increases
- Regulatory compliance - avoid potential fines and associated litigation costs

### **Optimization of odour abatement system performance**

- Increased system capacity – deferred CAPEX
- Optimized operations strategy – OPEX savings
- Reduced odour emissions – compliance with regulatory permits
- Justification of investment strategies

### **Transparent communications strategy**

- Increased transparency & contractual commitment
- Enhanced public image – « Good Corporate Citizen »
- Creation of added value for local resident population



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