

# INTRODUCTION

- Christiaan van Westing  
*DCMR: Environmental Inspector Emergency Response and Information Center (ERIC)*
- *eNose specialist*

# PRESENTATION SUMMARY

- Introduction Emergency Responce and Information Center
- Introduction WE-Nose network
- E-nose examples

# EMERGENCY RESPONSE AND INFORMATION CENTER

- Availability 24/7;
- Occupation: 20 employees
- 2 different functions:
  - Operator on call at the Information Centre
  - Environmental enforcer - callable picket (in the industrial area)
- Unique: Each employee serves both functions (Practical experience of the industrial area and surroundings improves to make better decisions at the Informatie Centre for example when there is an incident)



# ERIC TASKS

- Citizen complaints
- Company notifications;
- Incident management (industry);
- Investigation nuisance / enforcement;
- Monitoring environmental quality in cooperation with other emergency services
- Monitoring noise- and air quality
- Communication (internal and external)
- Requests for (chemical) information;
- Issuing a stench code (smell) in bad weather conditions

Last year: 18.290 complaints (in total)  
Noise (Industry and retail): 65%  
Noise (Air Traffic): 7%\*  
Odor: 22%  
Dust: 1%  
Remaining 5% (like Smoke (plume), water-, soil-, waste- and light pollution)  
\* This is only by telephone (in total combined with the online complaints an amount of 99.381

Last year: 6.437 company notifications.  
This were 8% incidents (industry) and 92% notifications with risk of nuisance

# INTRODUCTION WE-NOSE NETWORK



E-noses in de Rotterdamse haven.mp4

# WE-NOSE NETWORK

- The WE-nose network is not used as an enforcement tool
- DCMR uses the WE-nose network in addition (It does not indicate what odor it is, only changes in air quality)
- In some cases it's working as an early warning system.
- It is really good in detecting degassing (inland) tankers
- Past year we received 8000 alarms (mostly from a well known source), approx 5% is investigated by the centralist or environmental enforcer
- The eNose is for some substances sensitive and for other substances not or a little. (some substance has a low odor threshold, with little concentration a lot of nuisance, but too little to measure)



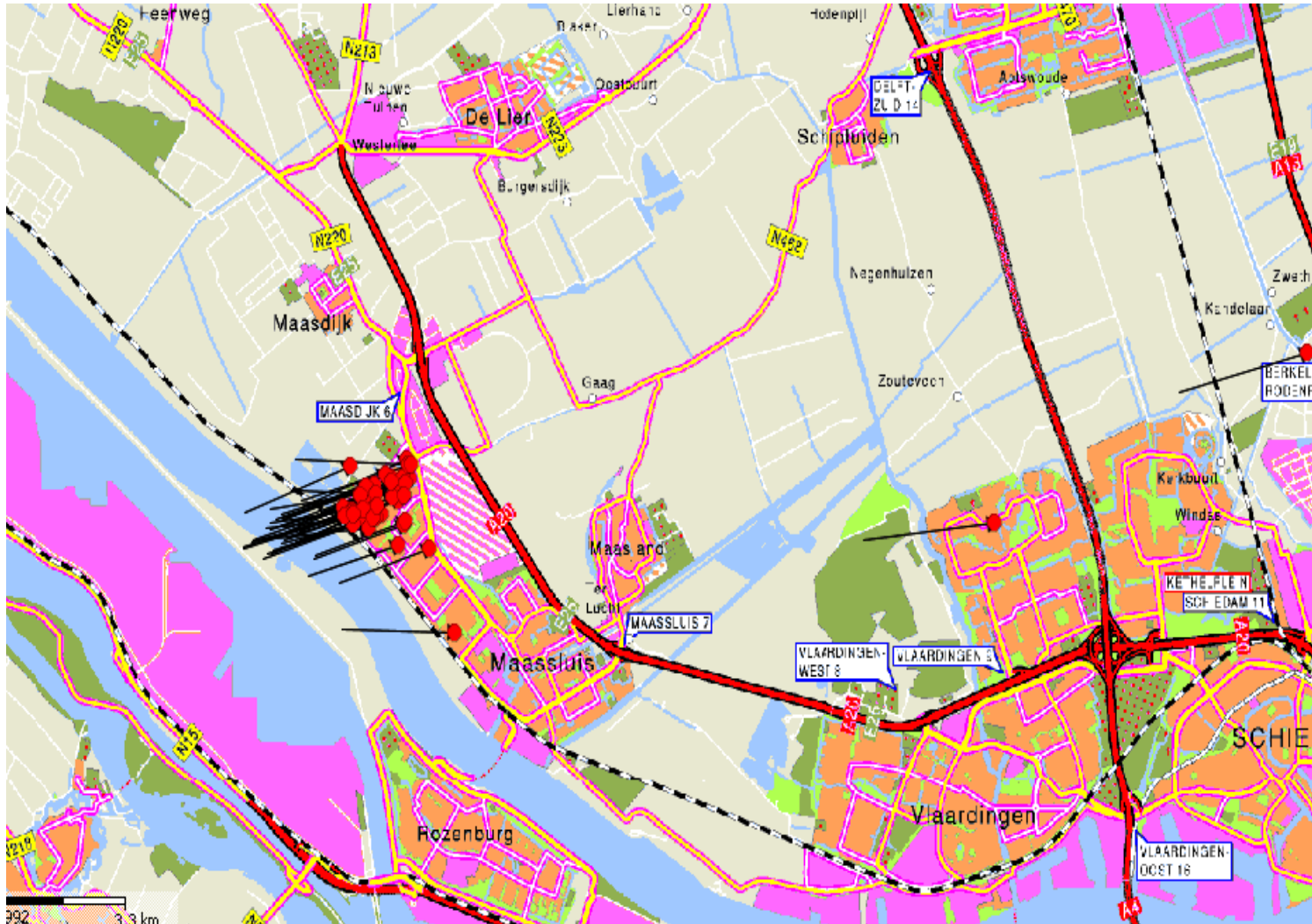
# E-NOSE EXAMPLE 1: EARLY WARNING



- 10:30 h - 11:50 h: 17 complaints from the public in Hoek van Holland)
- 13:00 h - 14:00 h: 2 complaints from the public in 's-Gravenzande
- Odor: heavy oil
- Investigation Nuisance by Environmental inspector
- Cause: loading a ship at a terminal empty from a Crude and degassing through mastriser

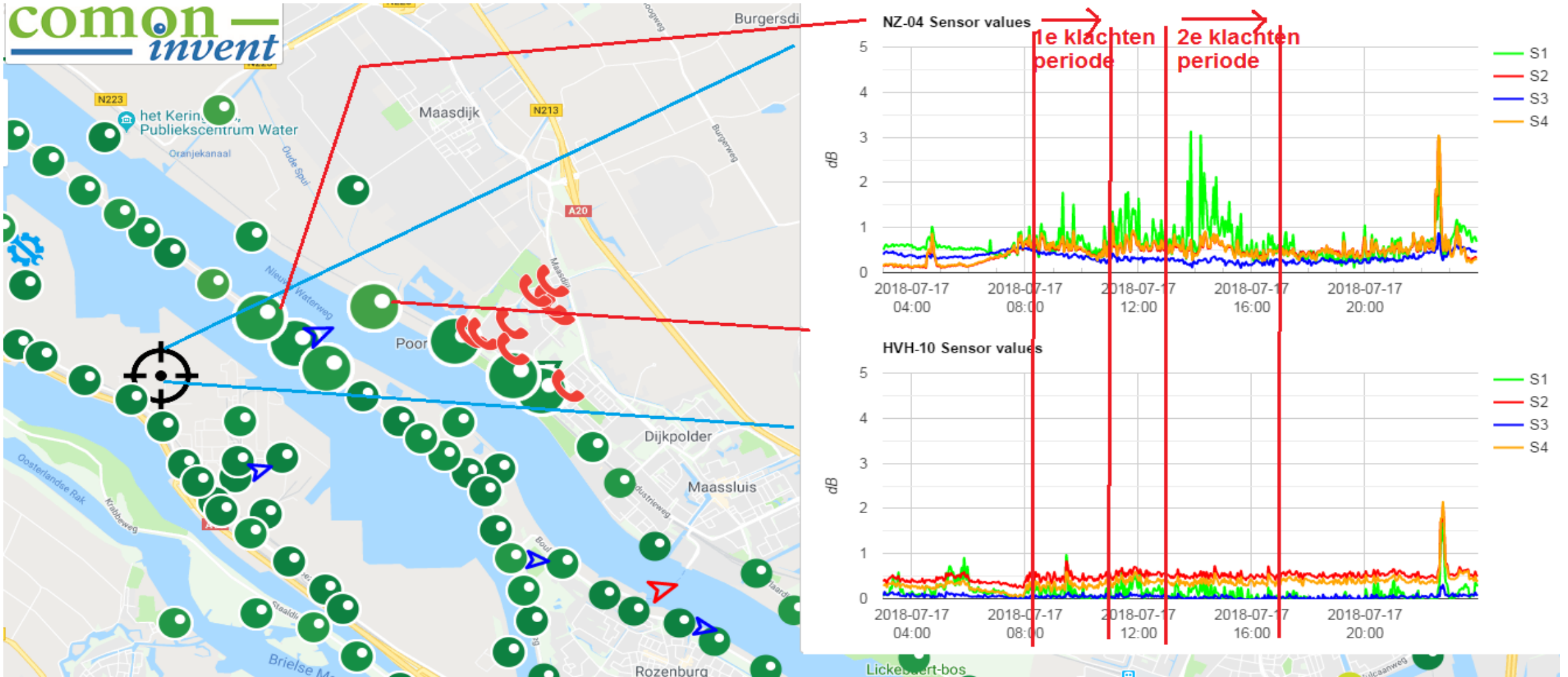


# E-NOSE EXAMPLE 2: NO EARLY WARNING



- 8:30 h – 10:45 h: 41 complaints from the citizen in Maassluis, Vlaardingen and Rotterdam
- Odor: sulphur (rotten eggs / H<sub>2</sub>S)
- ERIC: Monitoring e-noses
- Environmental inspector (callable picket): investigation Nuisance
- Cause: starting after turn around, sulphur recovery is not working stable causing a hydrogen sulfide rich gas flow to the flare. This in combination with too little fuel gas causes nuisance in the living area.
- Solution: more fuel gas on the flare

# E-NOSE EXAMPLE 2: NO EARLY WARNING



# E-NOSE EXAMPLE 3: DEGASSING INLAND TANKER (EARLY WARNING)



- Degassing tool: first alarm at 00:50 h
- 2 complaints about sulfur / rotten eggs odor from 2 companies in Rotterdam Europoort 1.27 h and 1.39 h
- ERIC informed Port Authority of Rotterdam
- Vessel reaches Rozenburg. Between 1:48 h and 2:21 h 21 complaints about the same odor
- Vessel turns and sails back and stops degassing after instruction of the Port Authority of Rotterdam
- The ship was degassing Naptha

# QUESTIONS?

