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Benefits of PMT criteria
for substances under
REACH for drinking
water company Oasen



Oasen drinking water company



753.000 customers



46 million m³/a



7 drinking water utilities

Supply Area

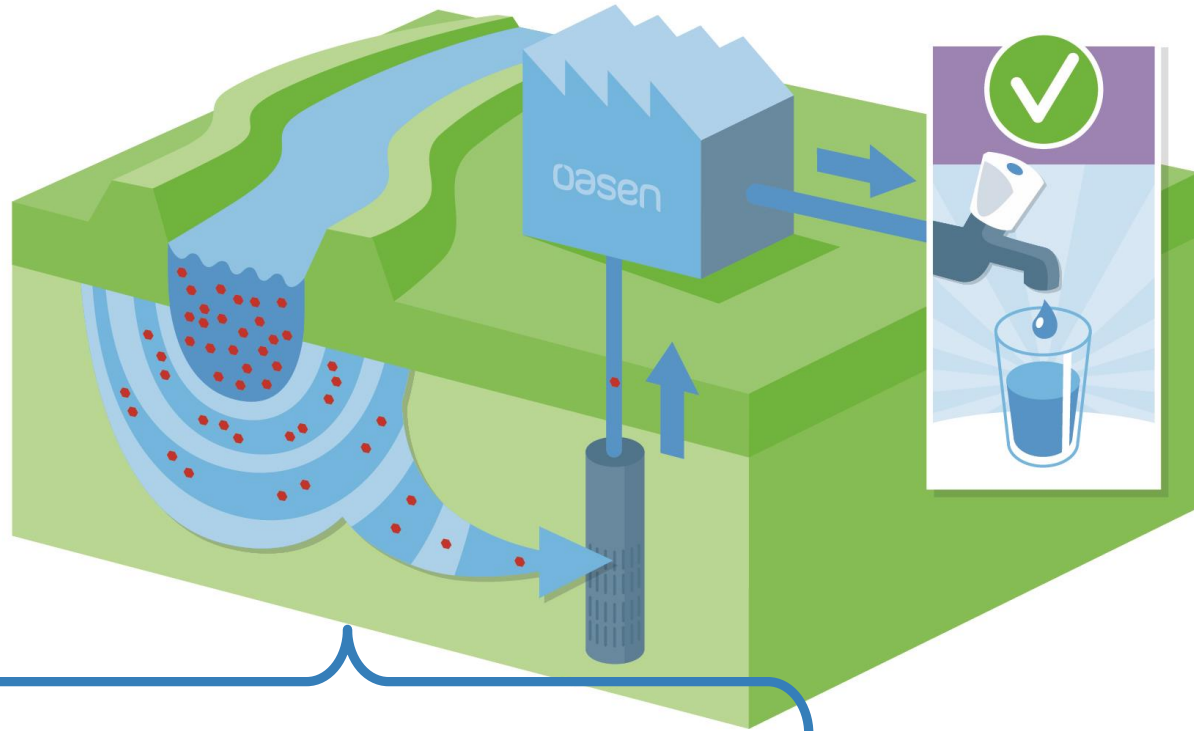


River Bank Filtration

Ufer Filtrat



B: 99.9 % purification



A: 95% natural processes

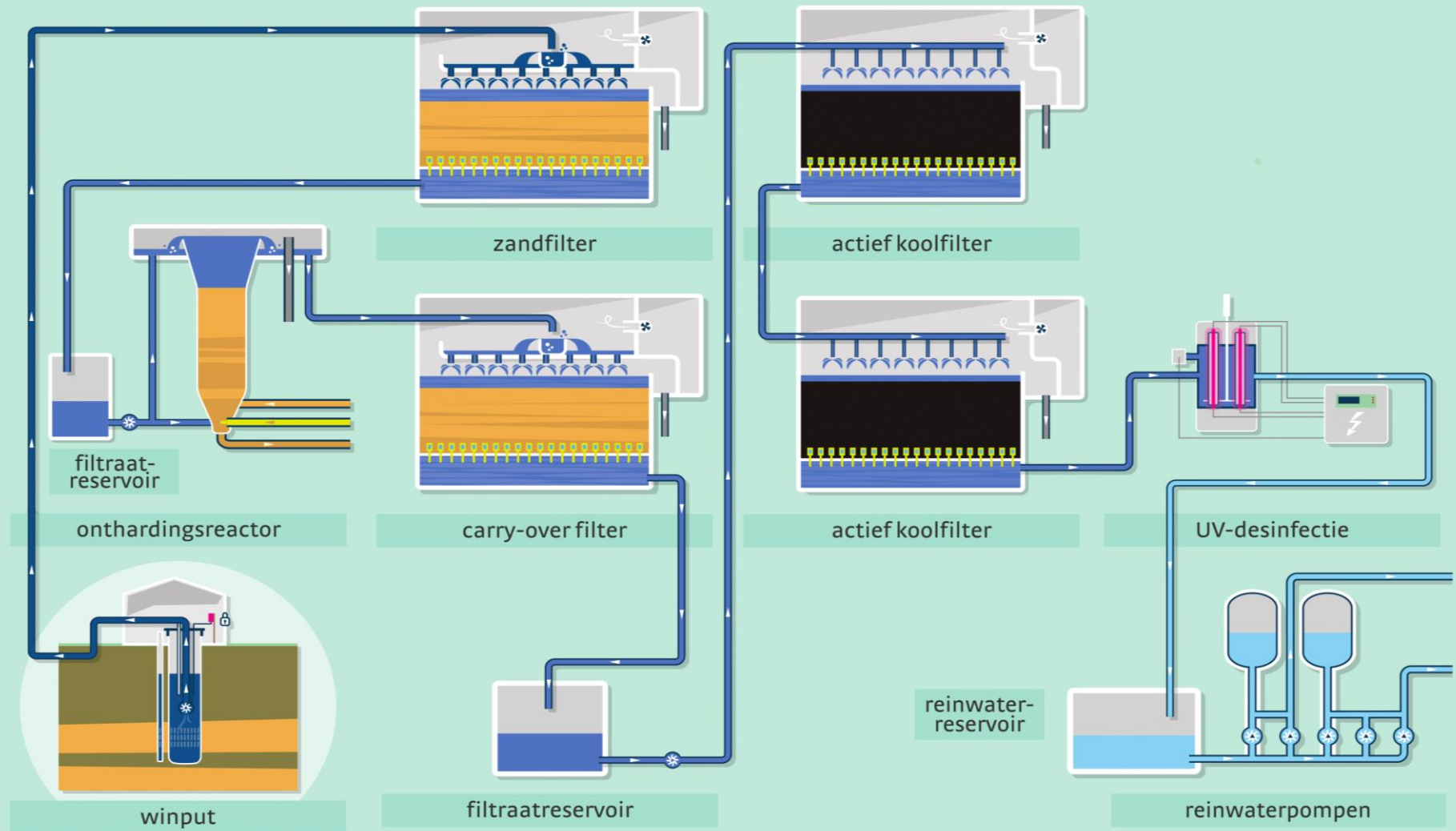


Drinking water utilities Oasen



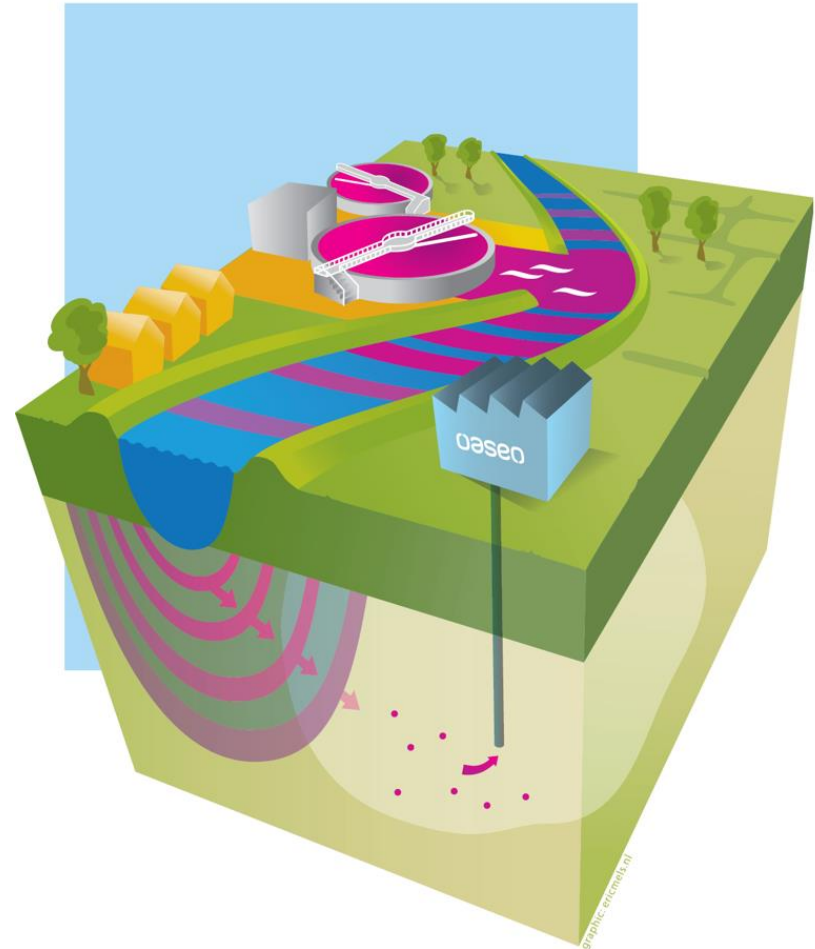


Current purification process drinking water



Threats

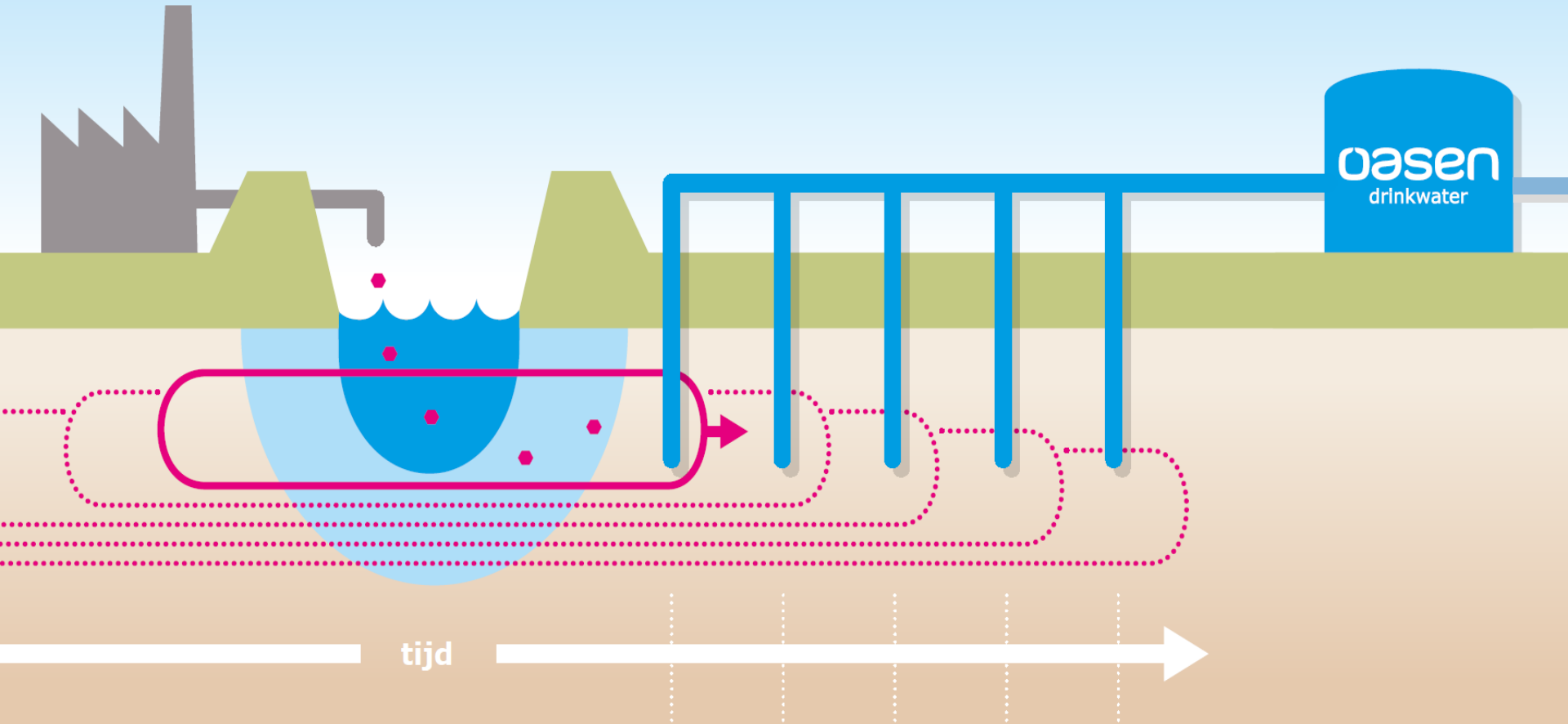
- Pharmaceuticals
- X-ray contrast media
- Endocrine disrupting compounds
- Pesticides
- Industrial emissions
- Cosmetics
- Detergents
- Dyes and micro plastics



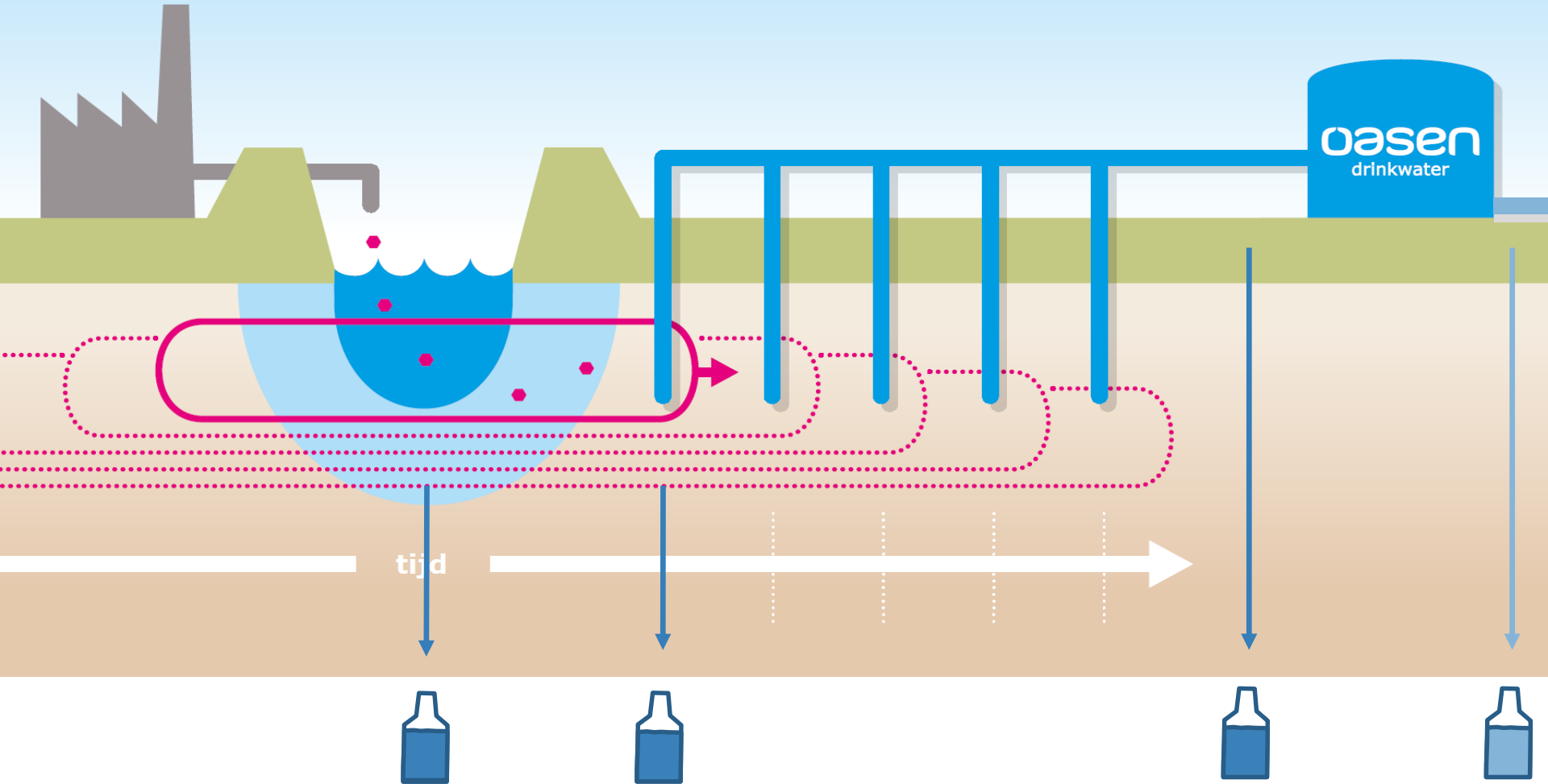
Monitoring micro pollutants in drinking water



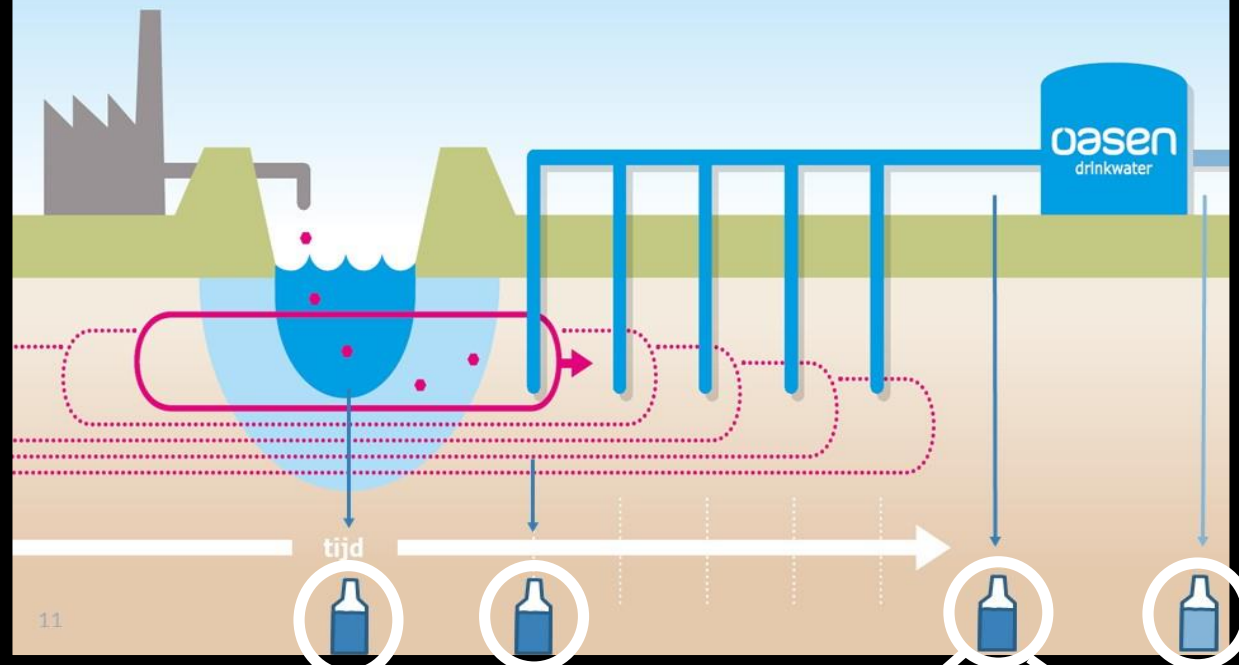
Monitoring micro pollutants



Monitoring micro pollutants



Monitoring micro pollutants



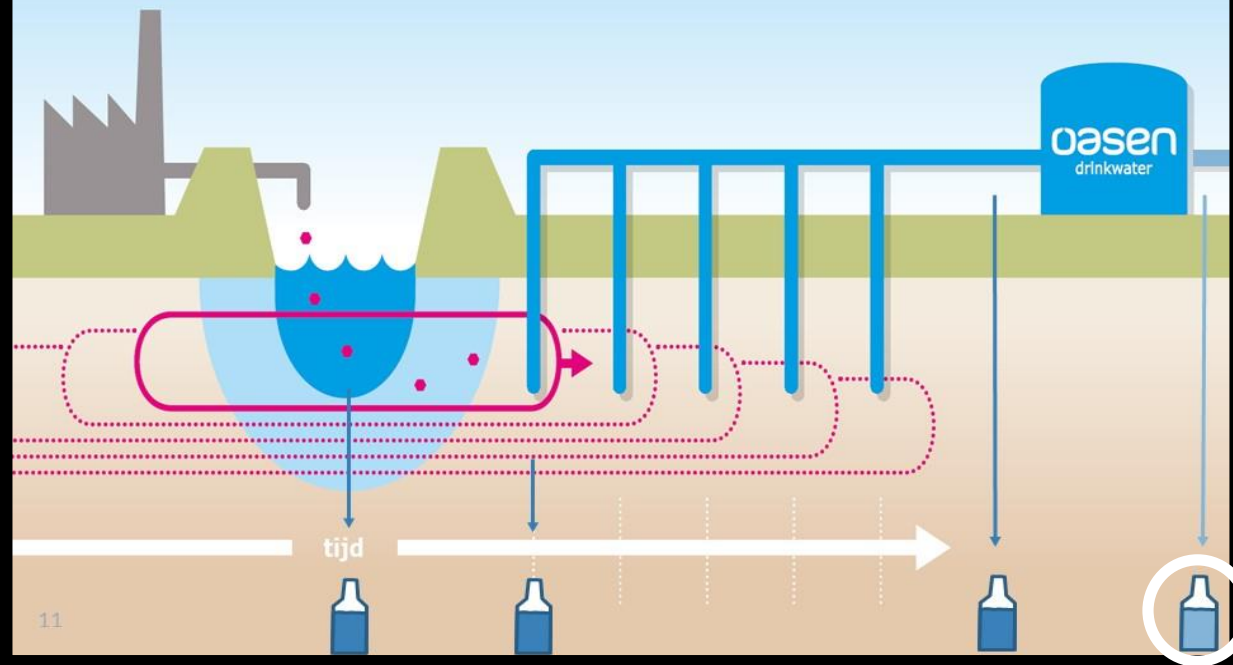
Anthropogenic Substances & regulatory framework

$> 1 \mu\text{g/l}$ or $> 0,1 \mu\text{g/l}$
Exemption needed
from regulator

$> 0,1 \mu\text{g/l}$
Attention!(Oasen)

$> 1 \mu\text{g/l}$
Exemption needed from regulator

Monitoring micro pollutants



When is action needed?

EDTA / TFA / MTBE /
1,4 Dioxan / PFOA /
PFOS / GenX /
Pyrazole (vPvM)

> 0,1 µg/l

High concern



MTBE / 1,4 Dioxan /
PFOA / PFOS / GenX /
Pyrazole (vPvM & PMT)

(Provisional) Drinking water
standard $\approx 1 \mu\text{g/l}$ or unknown
Very high concern

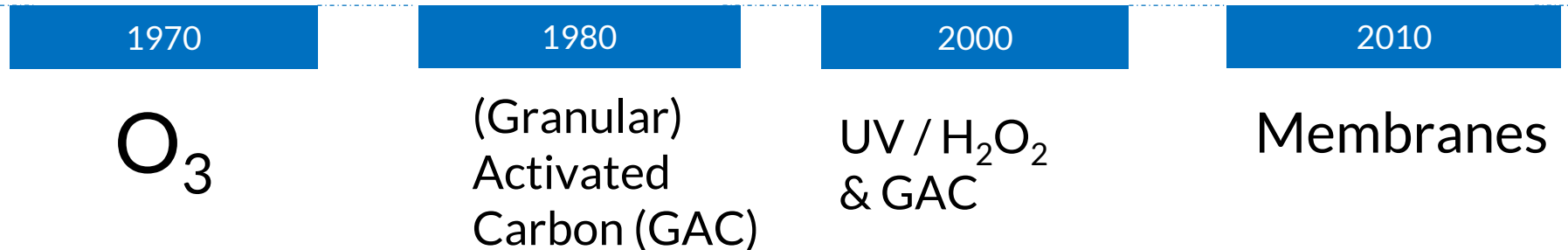


Actions by Drinking Water Supply Companies

Prevention (with RIWA / IAWR / Vewin / Eureau)

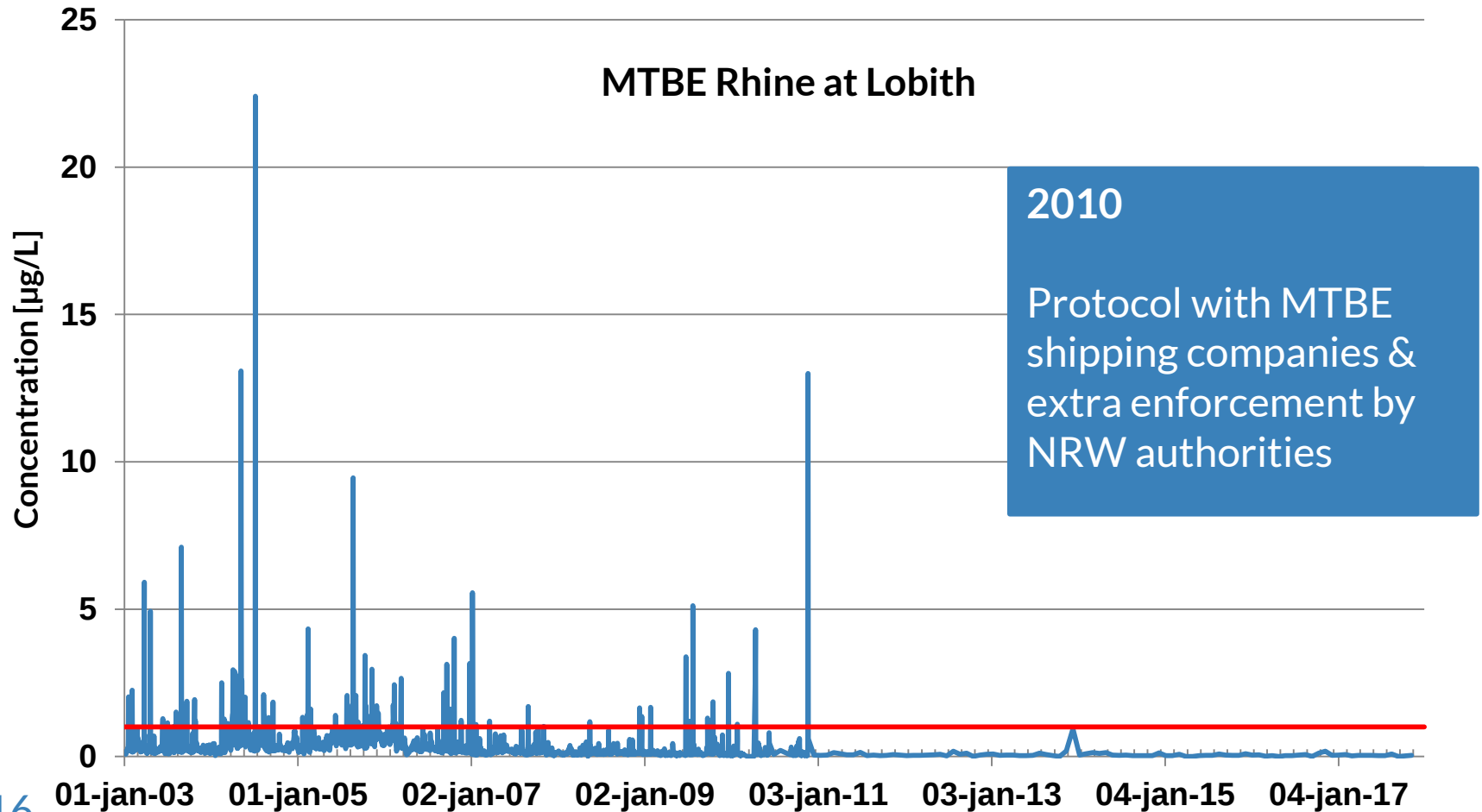
- Monitoring & contacting sources (discharges) of micro pollutants & regulators
- Lobby for improving better regulation (EU / National)
- Lobby for improved implementation of regulations

Research and implementing improved purification



ALL SOLUTIONS WITH ENVIRONMENTAL DRAWBACKS

Prevention example 1: MTBE (RIWA/IAWR)



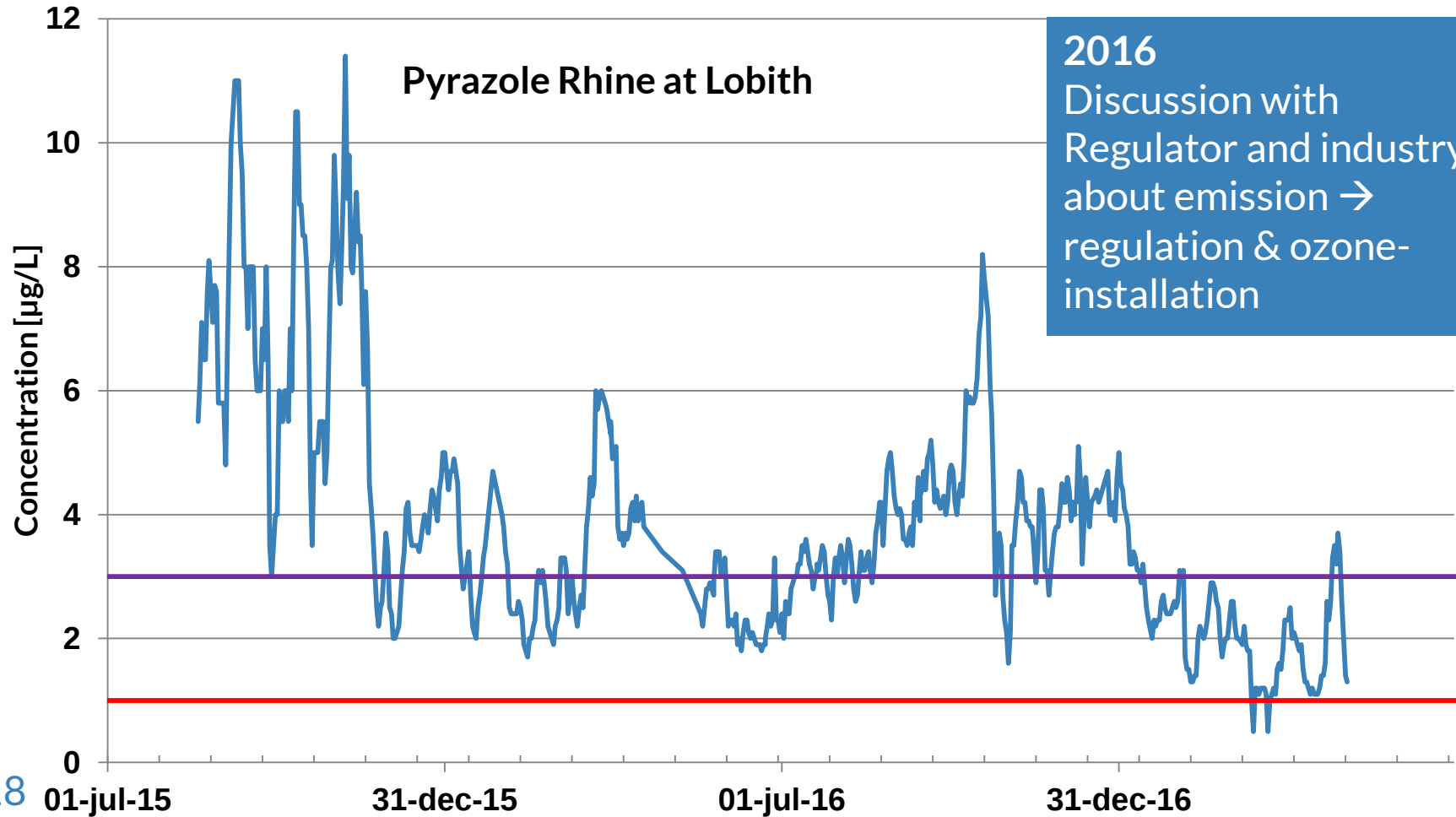


Prevention example 2

Pyrazole (RIWA/IAWR)

Prevention example 2: Pyrazole (RIWA/IAWR)

Pyrazole Rhine at Lobith



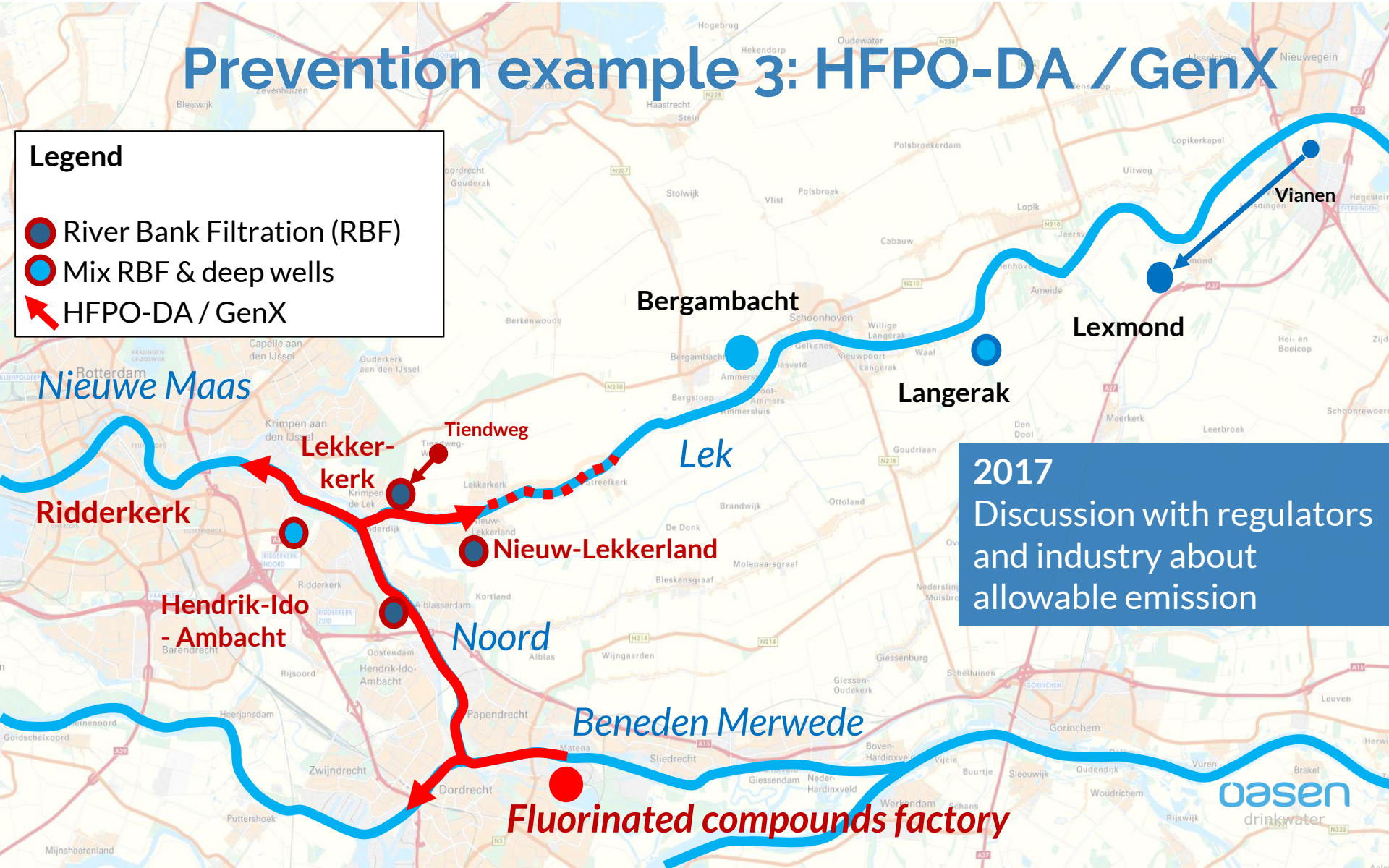
2016

Discussion with
Regulator and industry
about emission →
regulation & ozone-
installation

Prevention example 3: HFPO-DA / GenX

Legend

-  River Bank Filtration (RBF)
-  Mix RBF & deep wells
-  HFPO-DA / GenX



2017
Discussion with regulators
and industry about
allowable emission

Fluorinated compounds factory

oasen
drinkwater

Prevention example 4: Improving regulations



RIWA / IAWR/ Vewin / Eureau

- Improving & support for WFD-directive
- Threat for drinking water as criterium for admission chemical substances
- Support for vPvM & PMT criteria in REACH → SVHC



RIWA / Vewin & Ministry Of
Infrastructure and Water Management

- Improving legislation on discharge of SVHC substances upstream of drinking water intakes



Provinces / local regulators

- Improving implementation and knowledge of legislation

Research on improved purification



Bottom line

Prevention is better than cure



Thanks!
Any questions?



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