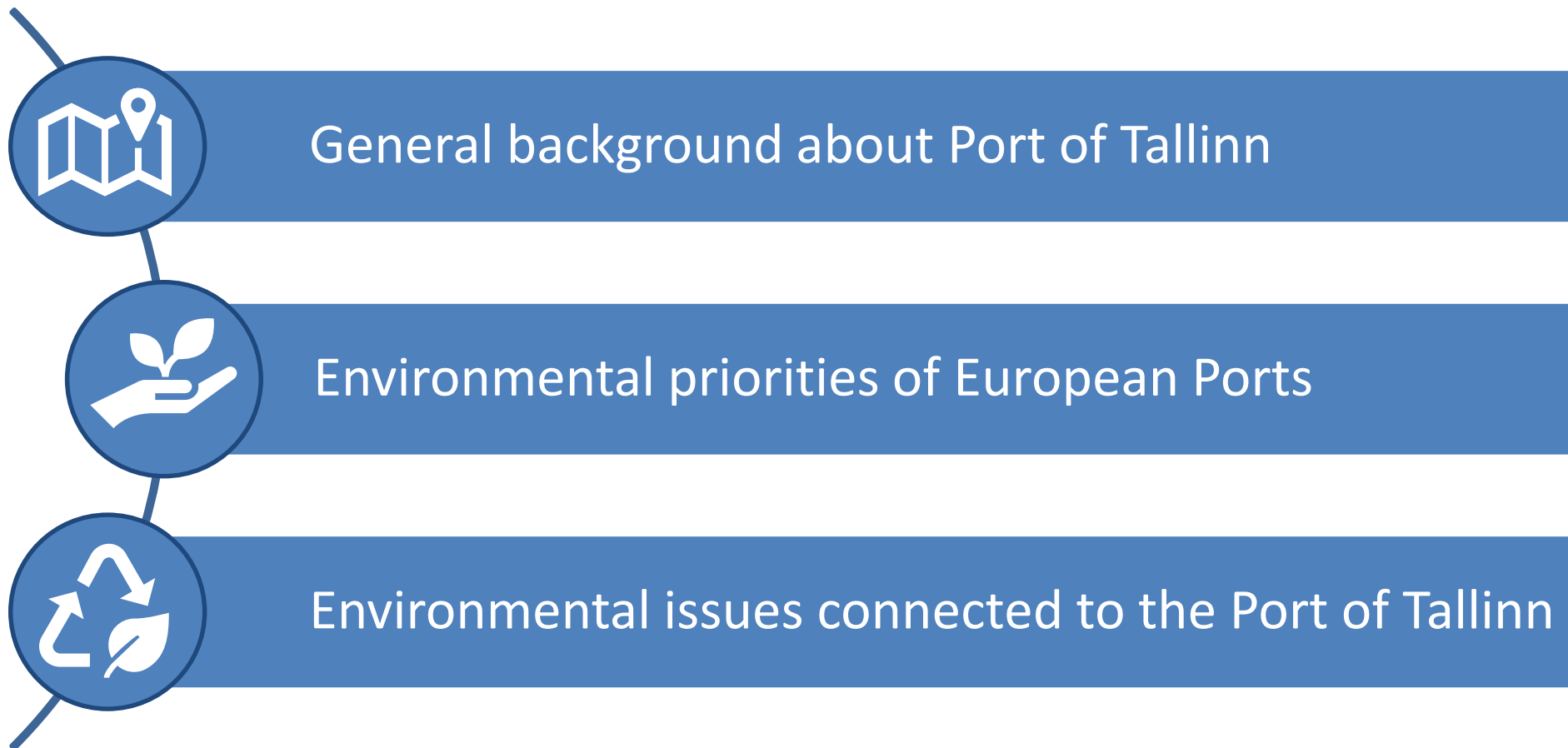


Environmental Management Activities

Janis Väärt
Chief Specialist of Quality and
Environmental Management



Structure of *presentation*



Organization

The company in a nutshell

- Port of Tallinn is a **landlord port**
- **We provide infrastructure** – land, quays and sea approaches
- **Private operators provide superstructure:** handling equipment and warehousing

PORT OF  TALLINN
The Port of Good News



PORT OF
TALLINN 

Governance

Listed on Nasdaq Tallinn SE since 13.06.2018

1) Shareholders meeting

67% Republic of Estonia

33% Investment funds, pension funds, private investors

2) Supervisory Board

6 members, appointed by shareholders meeting

3) Management Board

3 members, appointed by Supervisory Board



PORT OF TALLINN

Business Fields



Passengers

*10.6 M
passengers
a year*



Cargo

*20.6 M
tons a year*



Shipping

*5 ferries:
2 MM passengers &
1 MM vehicles a year;
Ice-breaker Botnica*



Real Estate

*Old City Harbour
Development 16 ha
Muuga Industrial Park 76 ha
Paldiski Industrial Park 34 ha*

Results in 2018

of The Port of Tallinn

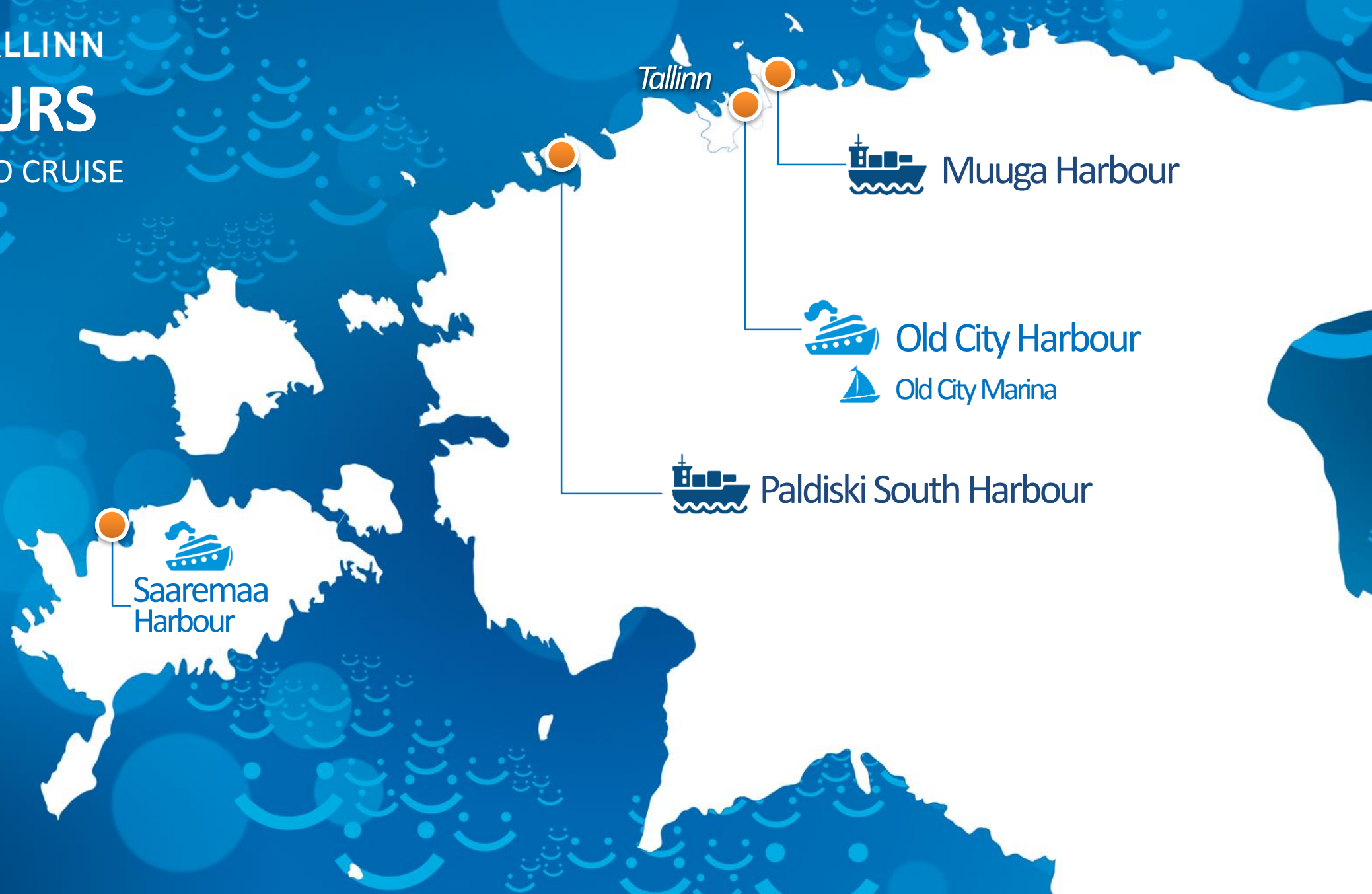
- 20.6 million tons of **cargo**
- 222,654 TEU **containers**
- 10.6 million **passengers**
- 1754 **cargo ship** calls
- 5550 **passenger ship** calls
- 348 **cruise ship** calls



PORT OF  TALLINN

HARBOURS

FROM CARGO TO CRUISE



Tallinn



Muuga Harbour



Old City Harbour



Old City Marina



Paldiski South Harbour



Saaremaa
Harbour

MUUGA HARBOUR

Estonia's Biggest Cargo Harbour

TERRITORY 567 ha
AQUATORY 682 ha
TOTAL LENGTH OF BERTHS 6,4 km
NUMBER OF BERTHS 29
MAX. DEPTH 18 m
MAX. LENGTH OF A VESSEL 300+ m

Containers, liquid bulk, solid bulk, general cargo, Ro-Ro


PORT OF
TALLINN



PALDISKI *SOUTH HARBOUR*

Port of Tallinn's Second Biggest Cargo Harbour

*Ro-Ro, general cargo,
solid bulk, liquid bulk*

An aerial photograph of the Paldisi South Harbour in Tallinn, Estonia. The harbour is a large body of water with several piers and berths. A large blue ship with 'TALLINK' written on its side is docked at one of the piers. The surrounding area includes industrial facilities, storage yards with piles of cargo, and a line of wind turbines on a hill in the background. The sky is clear and blue.

TERRITORY	119 ha
AQUATORY	147 ha
TOTAL LENGTH OF BERTHS	1,85 km
NUMBER OF BERTHS	10
MAX. DEPTH	14,5 m
MAX. LENGTH OF A VESSEL	230 m



OLD CITY HARBOUR

Estonia's Biggest Tourism Gateway

TERRITORY	55.3 ha
AQUATORY	94 ha
TOTAL LENGTH OF BERTHS	5 km
NUMBER OF BERTHS	24
MAX. DEPTH	10.7 m
MAX. LENGTH OF A VESSEL	340+ m

Passengers (ferries, cruises, yachts), Ro-Ro



SAAREMAA HARBOUR

Deepwater Harbour on Estonia' Biggest Island

TERRITORY	20 ha
AQUATORY	41 ha
TOTAL LENGTH OF BERTHS	445 m
NUMBER OF BERTHS	3 + floating pontoon
MAX. DEPTH	10 m
MAX. LENGTH OF A VESSEL	200 m

Passengers (yachts & cruises), cargo

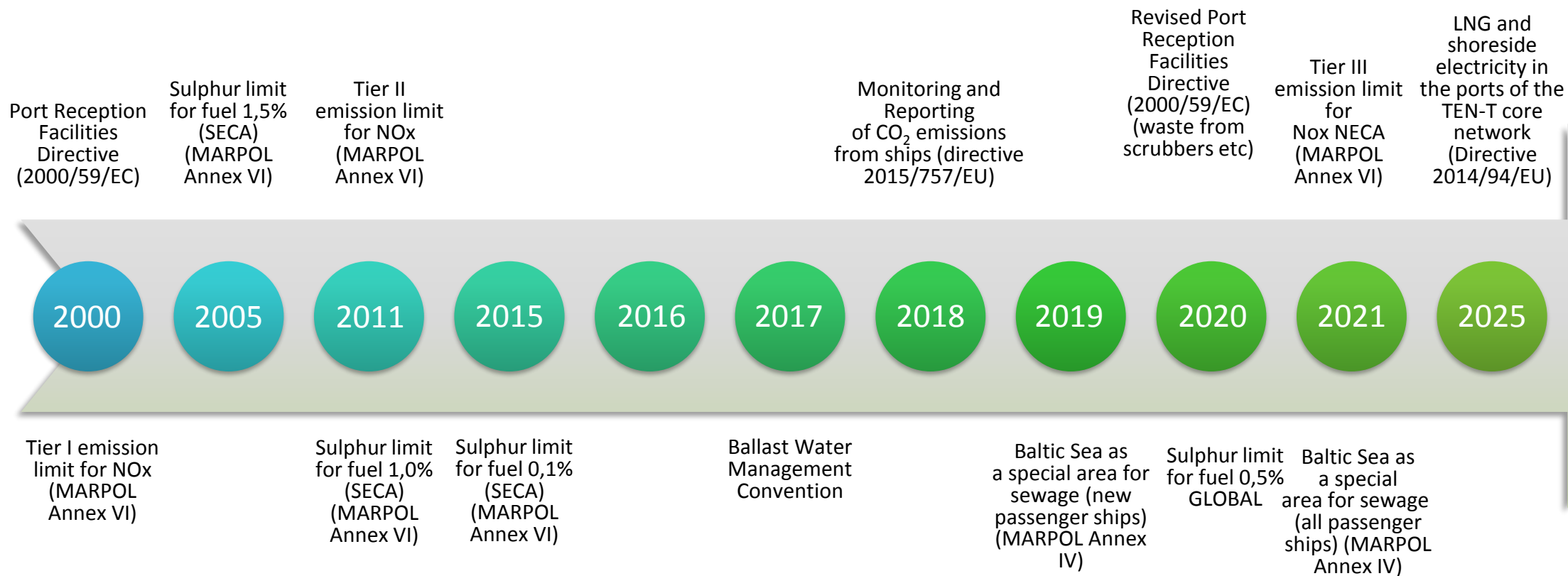




ENVIRONMENTAL PRIORITIES of European ports

Environmental Requirements For Ships & Ports

Timescale



Environmental performance of European Ports

Environmental Performance Indicators	2013	2018	Change 2013-2018
Existence of a Certified Environmental Management System – EMS (ISO, EMAS, PERS)	54%	73%	19%
Existence of an Environmental Policy	90%	96%	6%
Existence of an inventory of Significant Environmental Aspects (SEA)	84%	93%	9%
Definition of objectives and targets for environmental improvement	84%	93%	9%
Existence of an environmental monitoring programme	79%	89%	10%
Environmental responsibilities of key personnel are documented	71%	86%	15%
Publicly available environmental report	62%	68%	6%

Source: ESPO Environmental Report 2018 (www.espo.be)



Top 10 Environmental Priorities of European Ports





Port of Tallinn
ENVIRONMENTAL PRIORITIES

Environmental Policy

Operating principles pertaining to environmental management

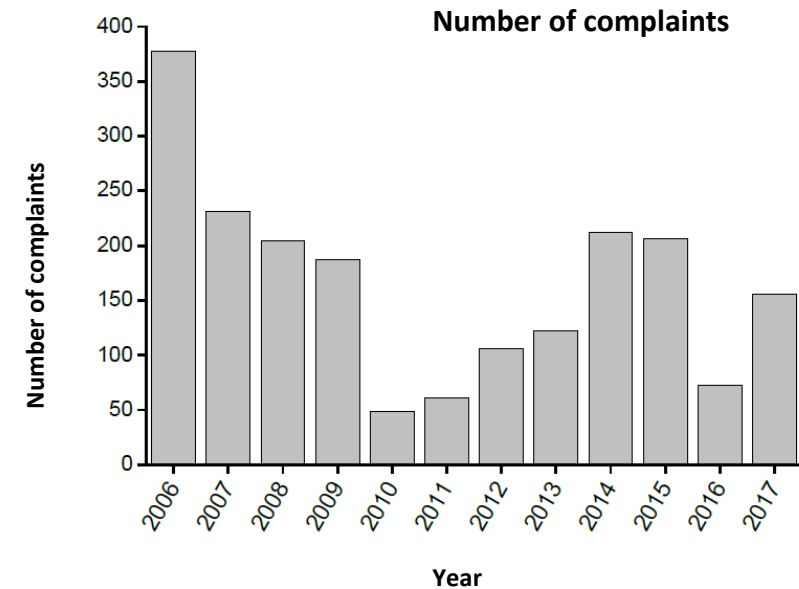
Prevention	<ul style="list-style-type: none">• To operate in environmentally friendly ways pursuant to the environmental pollution prevention principle• To assess all environmental impacts when planning development activities
Compliance	<ul style="list-style-type: none">• To comply with Estonian, European Union, European Sea Ports Organisation (ESPO) and international environmental legislation and guidelines• Since 2003, the Port of Tallinn Management System has been certified as being in compliance with the requirements of the ISO 9001:2008 Quality Management System and the ISO 14001:2004 Environmental Management System standards• 2018 new certification ISO 9001:2015; ISO 14001:2015
Co-operation	<ul style="list-style-type: none">• To take into consideration the public opinion and the suggestions made by our clients and customers in making any decision• To work in close co-operation with Estonian and international organisations, scientific establishments and research institutions and consultation companies in pursuit of our environmental policies and goals



AIR QUALITY

Air Quality Problems

- **The residential areas** nearby Muuga harbour (oil terminals) have been complaining bad air quality during several years
- During recent years the **real estate development** has been very intense in the area
- **The conflict of interests** between development of residential areas and industry were already preprogrammed into land planning process



Muuga Harbour

Air Surveillance

Measured pollutants:

- aliphatic hydrocarbons (NMHC)
- aromatic hydrocarbons (BTX)
- hydrogen sulphide (H₂S)

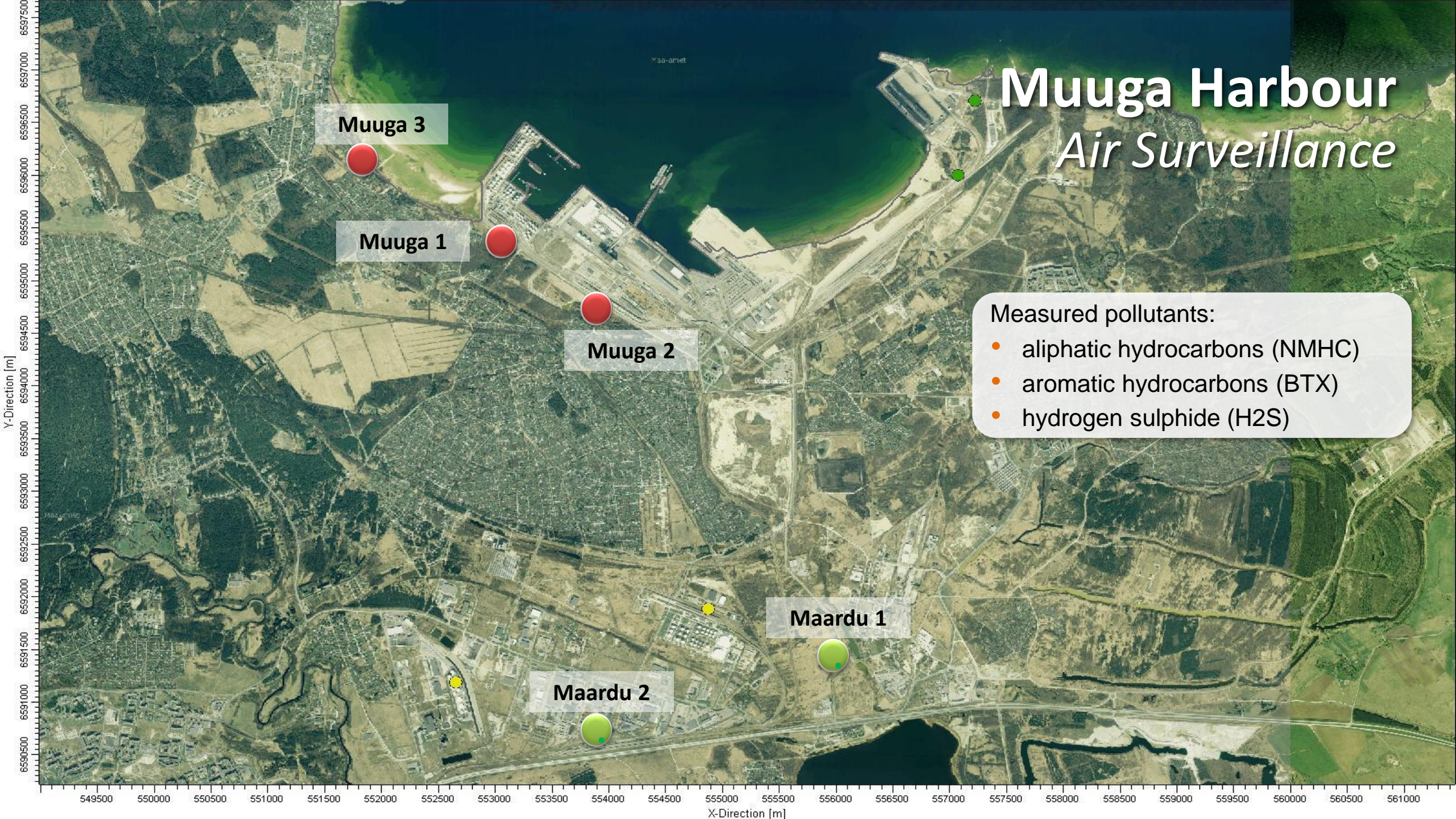
Muuga 3

Muuga 1

Muuga 2

Maardu 1

Maardu 2



Information to Public

Eesti Õhukvaliteedi Juhtimissüsteem
Seire, modelleerimine, infomaterjalid

Ülevaade

Infomaterjalid

Õhusaaste indeks

Seirevõrgustik

Linnaõhu andmed

Fooniõhu andmed

Ettevõtete omaseire

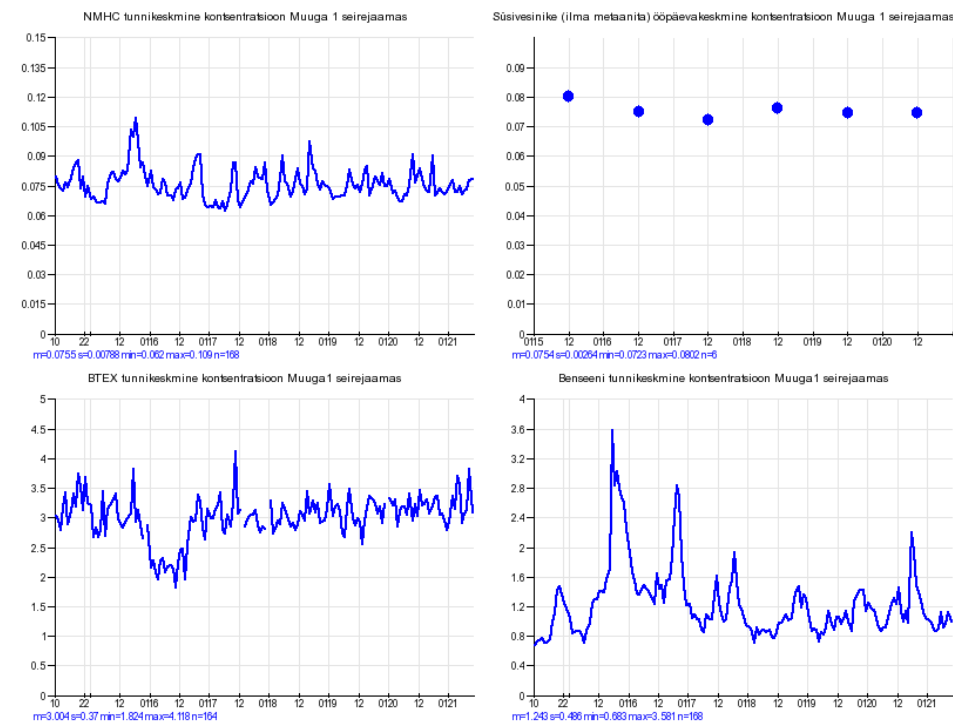
- Muuga 1
- Muuga 2
- Maardu 1
- Maardu 2
- Coal 1
- Coal 2
- Milstrand
- Paldiski
- Kunda

Meteomõõtmised

Modelleerimine

Muuga 1 seirejaama mõõdetulemused

Joonistel on toodud viimase nädala seireandmed, mida uuendatakse jooksvalt iga tund. Siit on võimalik teha andmebaasi päringuid.



Eesti Õhukvaliteedi Juhtimissüsteem
Seire, modelleerimine, infomaterjalid

Ülevaade

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Õhusaaste indeks

Seirevõrgustik

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Ettevõtete omaseire

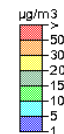
Meteomõõtmised

Modelleerimine

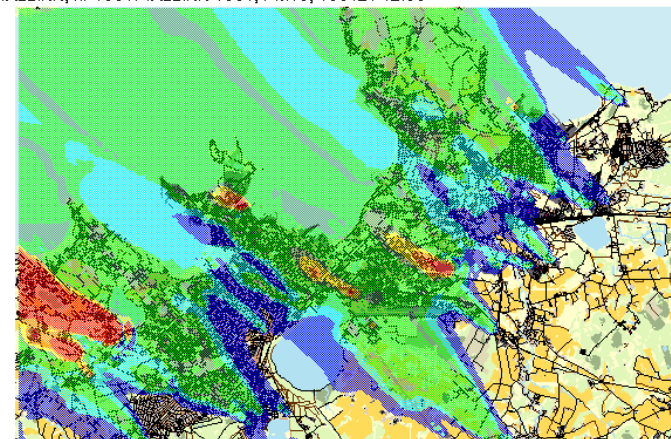
- Tallinn
- Tartu
- Pärnu
- Narva
- Kohtla-Järve

Automaatne õhukvaliteedi modelleerimine Tallinnas

Peened osakesed



EU, TALLINN, nr 1001: TALLINN 1001, PM10, 100121 12:00



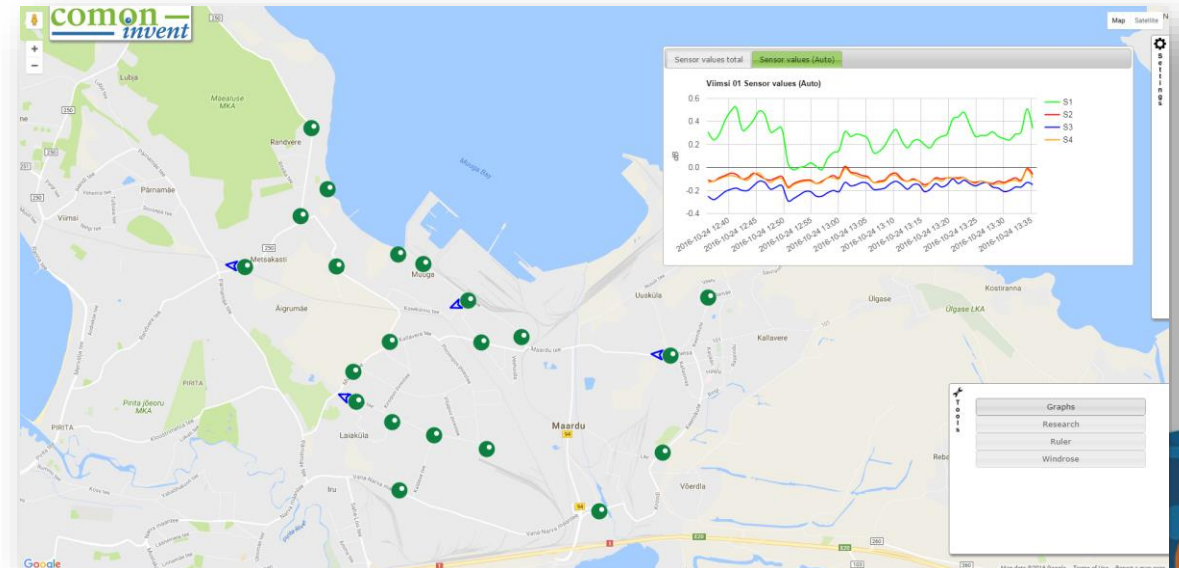
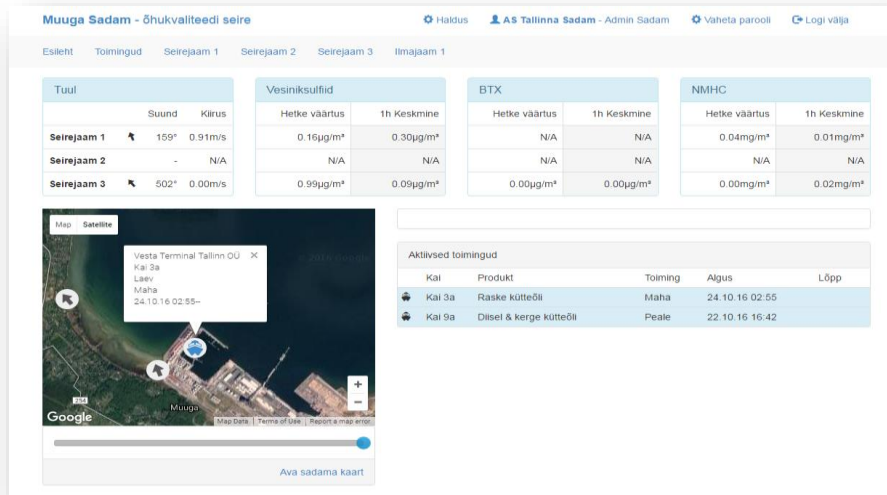
Real time air quality data is available to
public via Internet page:
<http://airviro.klab.ee/>



MAIRIS/e-Nose system

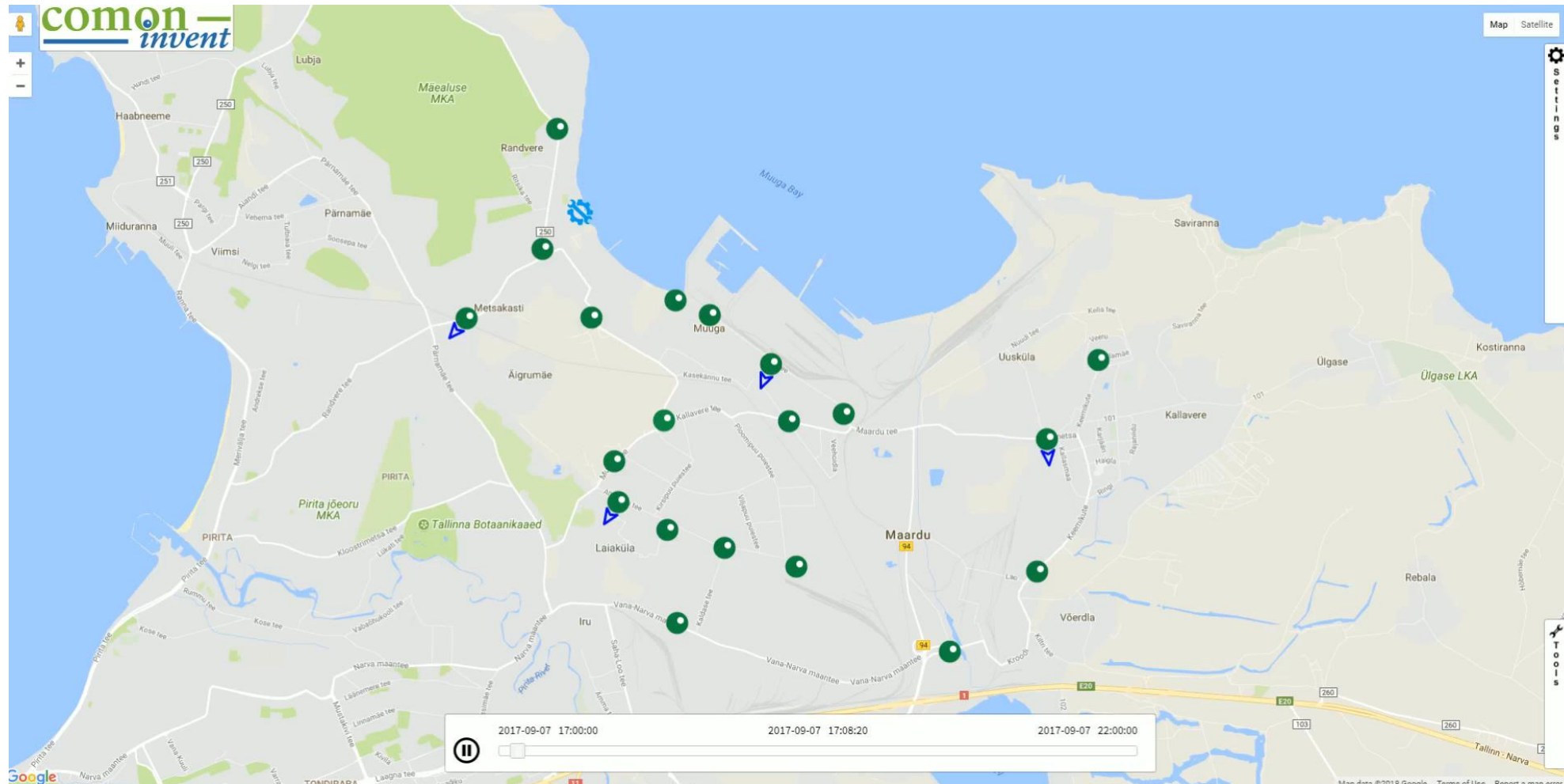
Monitoring air quality & detecting anomalies

- **Reducing** the risk of **noxious air pollution** caused by oil companies
- **Detecting** anomalies in air composition
- Getting updated info about the sources of anomalies – **24/7 online data, updated every minute**
- **Pilot project** – a Network of 20 eNoses



Example

Good relation between eNose and odour complaints

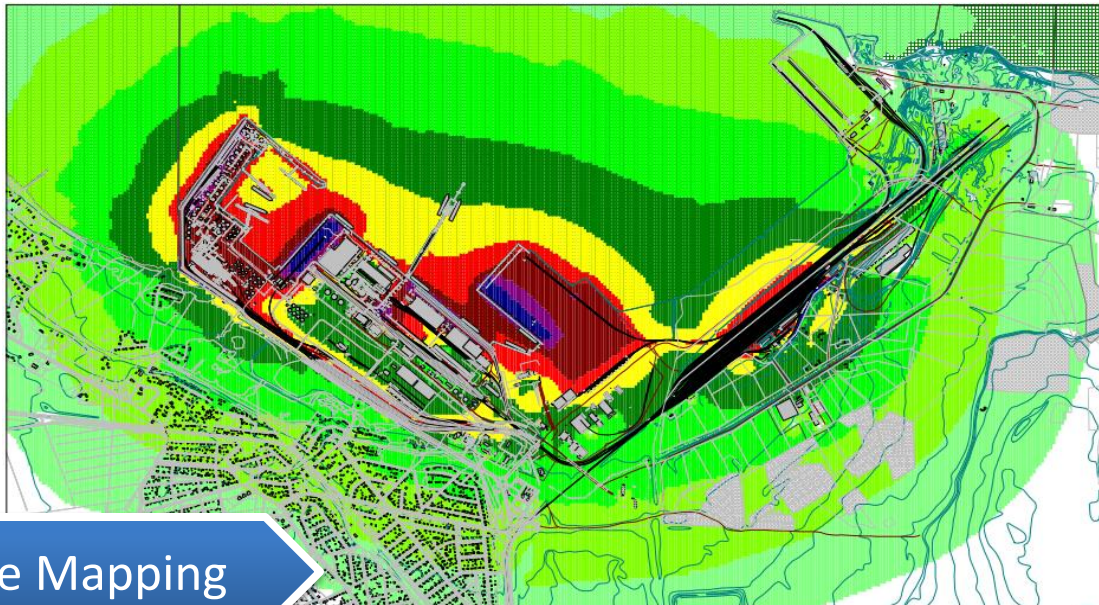




NOISE

Noise Reduction

Noise Source



Noise Mapping

Solution



- **Improvement of work organization:** restricted activities (23:00-07:00)
- Construction of a **noise reduction barrier** – min 4m high and 700m long





WASTE MANAGEMENT

Handling of ship-generated waste

- The **best environmental practices** for ship-generated waste management based on **circular economy**
- Adequate and **simple-to-use** waste handling facilities:
 - Domestic waste collection system exclusively based around **multilift containers**
 - Large number of multilift and press containers sail **aboard ferries**
- Port of Tallinn is **the only port** which receives **scrubber waste** on account of waste fee

Meeting our
clients needs
24/7/365

Aim to increase
ship-generated
waste **recycling**
rate (2018 – 93%)



WASTE HANDLING

ISSUES

Ships calling at Port of Tallinn harbours shall have the obligation to pay waste fee and this **does not directly depend on quantity** of ship-generated **waste** delivered.

For waste fee the following ship-generated waste shall be received from the vessel:

- bilge water;
- oily sludge;
- sewage;
- garbage;
- Hazardous waste (oily rags etc)
- other ship-generated waste
(excl. cargo residues)





WATER QUALITY

Baltic Sea as a Special Area for Sewage from Passenger Ships

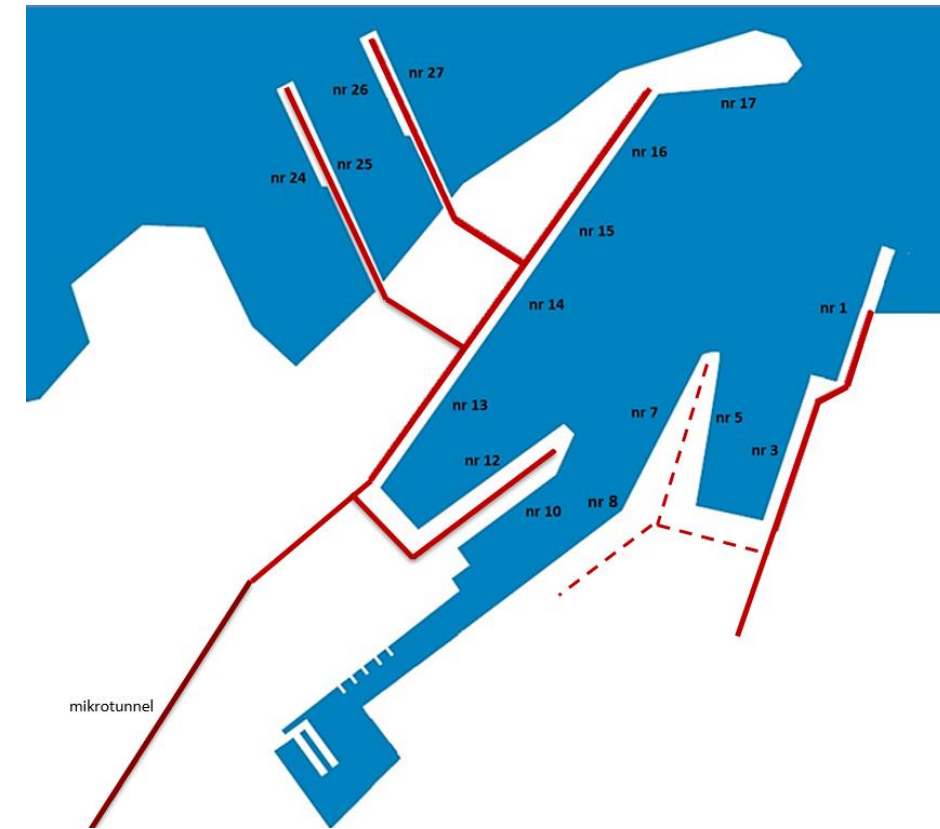
- On 22 of April 2016 the Marine Environment Protection Committee of the International Maritime Organization (IMO) at its 69th session reached the decision that passenger ship **sewage discharges into the Baltic Sea will be banned from 2021;**
- with the regulations as from **1 June 2019;**
- For existing ships the time limit is **1 June 2021;**
- In certain cases of direct passages between St. Petersburg area and the North Sea, there is a two-year extension to the deadline, **until 2023.**

Port Reception Facilities

for Cruise Ships & Ferries

- Construction of **micro-tunnel** (completed 2016) – *(EUR 1,8 M – co-financed by EU project TWIN-PORT2)*
- **Connects** the sewage pipeline with the deep sewer system of the **city**
- Total reception capacity of sewage **1,200 m³/h**

The establishment of PRF is dedicated to the fulfillment of the HELCOM BSAP goals, IMO and MARPOL Annex IV regulations for Baltic Sea „*special area*“.



Co-financed by the European Union
Connecting Europe Facility



GREEN SERVICES to shipping

OPS and automooring

- **On-shore power supply** – cooperation with the **Port of Helsinki, Port of Turku and Ports of Stockholm** to agree to provide in all their ports **on-shore power supply for 11kV** for Ro-Pax vessels.
- **Automooring** – quick, efficient and safe



LNG bunkering of Megastar

- Time frame: 01:30-6:00
- Frequency: 5 times a week
- Volume: 2x2 trucks every time = 4x18t=72t LNG



LNG TERMINAL

in Muuga Harbour

- Terminal size 4,000 – 50,000 m³
- Ships up to 75,000 m³
- LNG bunkering + truck loading facilities
- Connection with the low pressure and high pressure gas grid



DIFFERENTIATED PORT FEES FOR “GREENER” VESSELS

- Environmental Ship Index (ESI) discount from tonnage charge:
 - ESI score 65 – 79,9: 3%
 - ESI score ≥ 80 : 8%
- Waste sorting discount for cruise ships:
 - 10% discount from waste fee

Think Smart



Act Green



PORT OF  TALLINN

The Port of Good News

Thank You!

www.portoftallinn.com



ISO 9001
ISO 14001
BUREAU VERITAS
Certification

