PORT OF TALLINN
The Port of Good News

Port of Tallinn: Estonia's Biggest Maritime Gateway *Going Smart & Digital*

Valdo Kalm
Chairman of the Management Board
Port of Tallinn

Industry Dynamics

MEGATRENDS

Larger Vessels

Cost Pressure

Technology and atomation

Environmental Regulation

- Security of borders and assets
- Safety of personnel
- Productivity and throughput
- Automation and process efficiency
- Collaboration with stakeholders
- real time voice & data Connectivity
- Environment monitoring & Reporting
- Customer Experience

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A smart port is

AUTOMATED and DIGITAL

Fully automated operation from STS Cranes to AGV, using big data

LEARNING

Capture of data for analytics and predictive modelling

EFFICIENT

Optimised Port Of Call process coordinated with inland transport

SUSTAINABLE

Use of renewable energy
Network of sensors to monitor environmental health.

INTEGRATED

Collaborative Decision Making based on single source of information

SECURE

Coastal/border security
Cyber security

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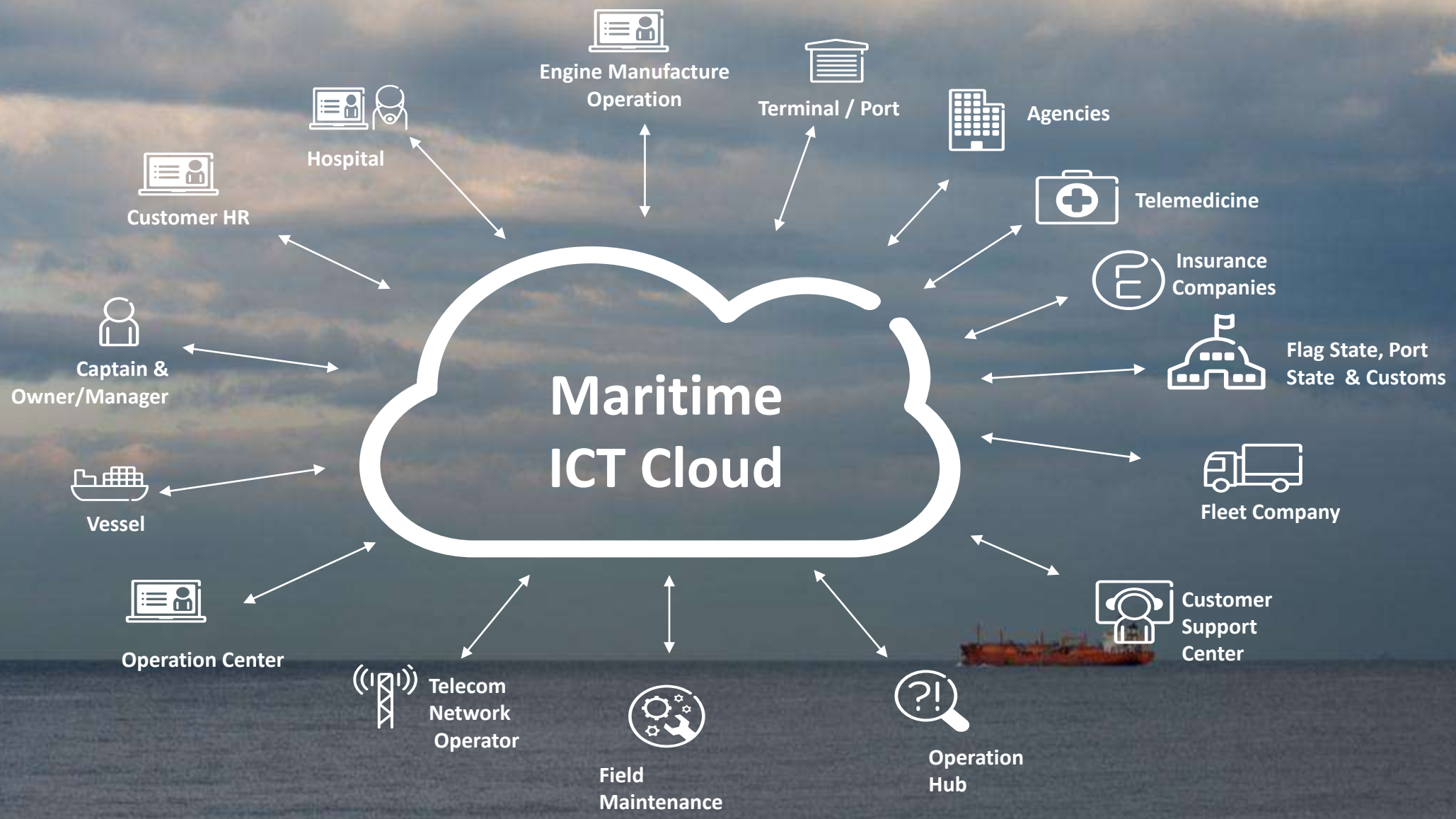
Maritime ICT cloud



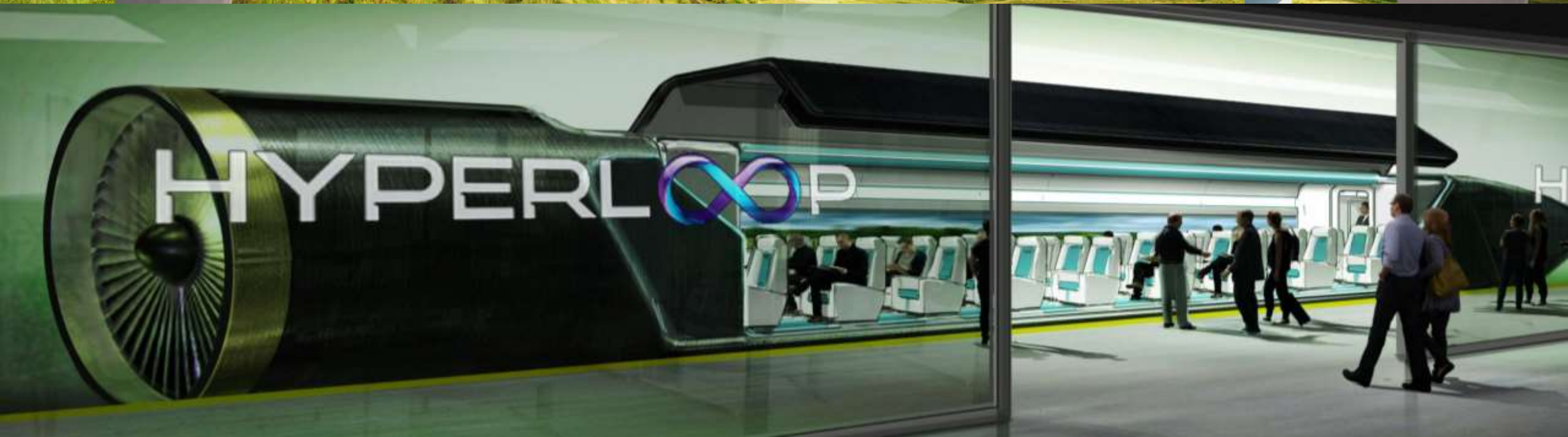
Logistics +
e-Commerce

omniva

Post11
Part of Estonian Post Group

Logistics +
Industry 4.0

Logistics + 1 = Logistics 5.0 =
Hyperloop



Our VISION:

To become ***the most innovative port on the shores of the Baltic Sea*** by offering its customers the best ***environment*** and ***development opportunities.***

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Business Fields

Passengers

10 mil passengers a year

Cargo

20 mil tons a year

Real Estate

Industrial parks 86 ha
Old City Harbour 50 ha

Shipping

Ferry shipping - 2 mil passengers a year;
Ice-breaker Botnica

PORT OF TALLINN
HARBOURS
FROM CARGO TO CRUISE
Tallinn
Muuga Harbour
Old City Harbour
Old City Marina
Paljassaare Harbour
Paldiski South Harbour
Saaremaa Harbour

Old City *Harbour*

Estonia's Biggest Tourism Gateway

TERRITORY	54.2 ha
AQUATORY	75.9 ha
TOTAL LENGTH OF BERTHS	5 km
NUMBER OF BERTHS	25
MAX. DEPTH	10.7 m
MAX. LENGTH OF A VESSEL	340+ m

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

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Ferry lines

from Old City Harbour

- **2h trip** to Helsinki
- **Mini-cruise** to Stockholm
- **72h visa-free** visit to St. Petersburg

Co-financed by the European Union
Connecting Europe Facility

SMART PORT Project

in Old City Harbour

- **A traffic flow management solution** organizing pre check-in, check-in and line management **for ports** with multiple **ferry operators** by providing holistic and easy to understand service for **people** with trucks and cars.

- Improving passenger **experience** and reducing **environmental impact.**

- Developed in cooperation with:

NORTAL Hansab it works

- **Tight cooperation with ferry operators** – Tallink, Viking Line, Eckerö Line, Moby SPL and with **ports** of Kristiansand, Helsinki, Stockholm and other neighbouring ports.

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Smart *Port*

Smart Port solution has 3 key components:

1. **Communication** with various **systems** (ferry operators, customs, etc)

2. **Customer experience management**
   (online pre-registration, check-in procedures, traffic lane management)

3. **Hardware automation**
   (gates' management, number plate recognition, traffic sign control, automatic vehicle dimension validation against pre-registration information)

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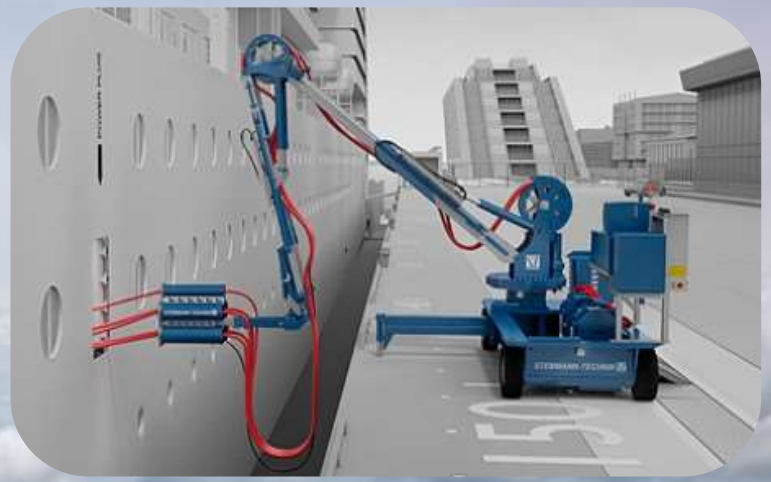
Co-financed by the European Union
Connecting Europe Facility
Smart Port Project
First of the Kind
in the Region!

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

One vision of *Masterplan 2030*

Streamcity

Zaha Hadid Architects

Streamcity

Zaha Hadid Architects

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PALDISKI *SOUTH HARBOUR*

Estonia's Main Ro-Ro Harbour

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

TERRITORY	114.7 ha
AQUATORY	134,5 ha
TOTAL LENGTH OF BERTHS	1,85 km
NUMBER OF BERTHS	10
MAX. DEPTH	14,5 m
MAX. LENGTH OF A VESSEL	230 m

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MUUGA *HARBOUR*

Estonia's Biggest Cargo Harbour

TERRITORY	524.2 ha
AQUATORY	752 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

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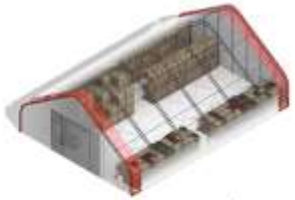
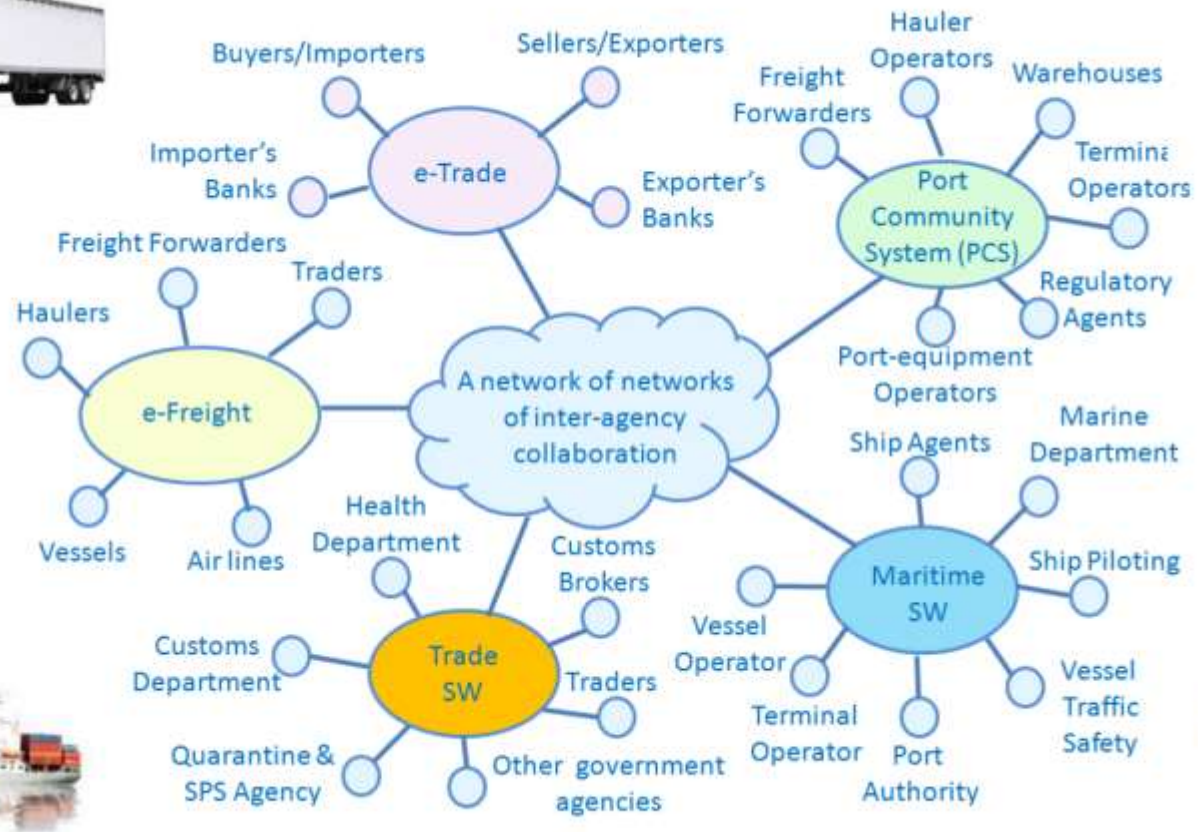
Logistics and transport info X-Road: *Single Window*





- Members of the Estonian Logistics and Transit Association and Prolog (Estonian Purchasing and Supply Chain Management Association) are developing **a joint info platform for logistics and transport**

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Port of Tallinn pilot-projects in 2017

cooperation in Single Window

1) **Digitalization of the logistic chain**– a joint information platform for cargo handling procedures and data processing by using the blockchain technology

1) **Queue Management Service** for trucks to manage the arrival of trucks entering the port through a *Just-In-Time* process based on a virtual queue concept

Vopak E.O.S.

TK

EESTI RAUDTEE
EVR Cargo

ERAA
ASSOCIATION OF ESTONIAN INTERNATIONAL ROAD CARRIERS

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Blockchain *Project*

- A trial **paperless logistical platform**
- Enables **monitoring** of loading, customs processing and pre-shipment of **export containers in real time**
- Substantially reduces **paper consumption** and **bureaucracy**
- **Accelerates** all the processes
- Globally **unique** system

SmartLog blockchain logistics

Interreg Central Baltic

European Union
European Regional Development Fund

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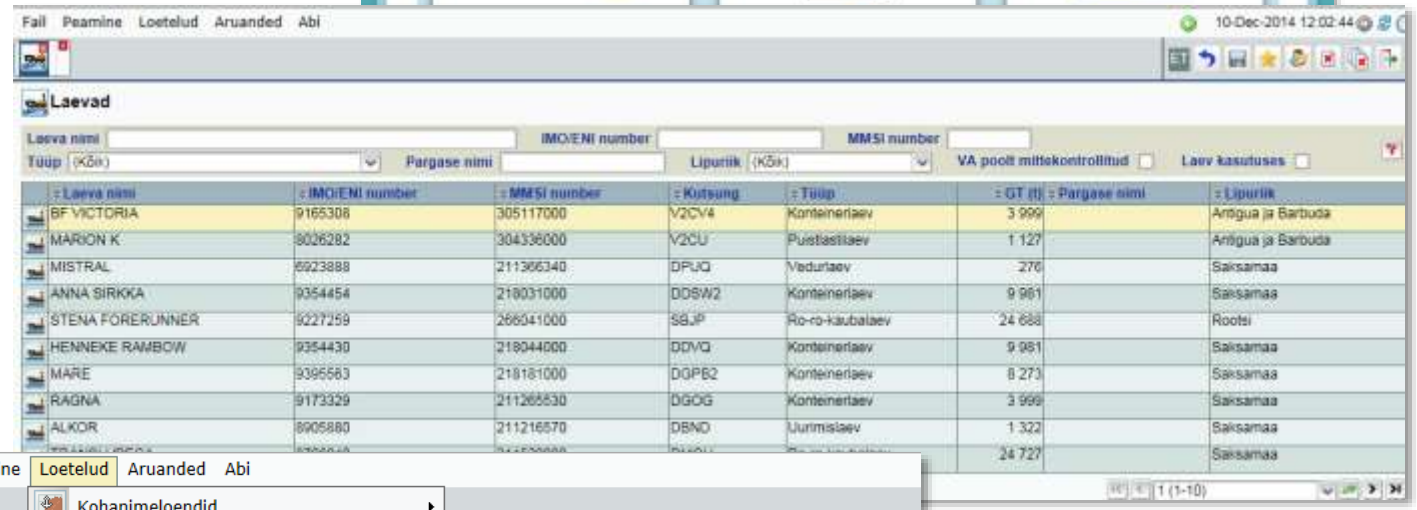
EMDE and *Single Window*

- EMDE *(Estonian Maritime Documents Exchange)* **synchronization of data on ship visits and automatic transfer of uploaded documents to the port and relevant authorities**

- Harbour Master's Department can carry out necessary EMDE procedures directly via the **Port Management Program FlexPort**

- Electronic data exchange works through **web solutions** and **XML-messages**. Also PDF-files are used as an alternative



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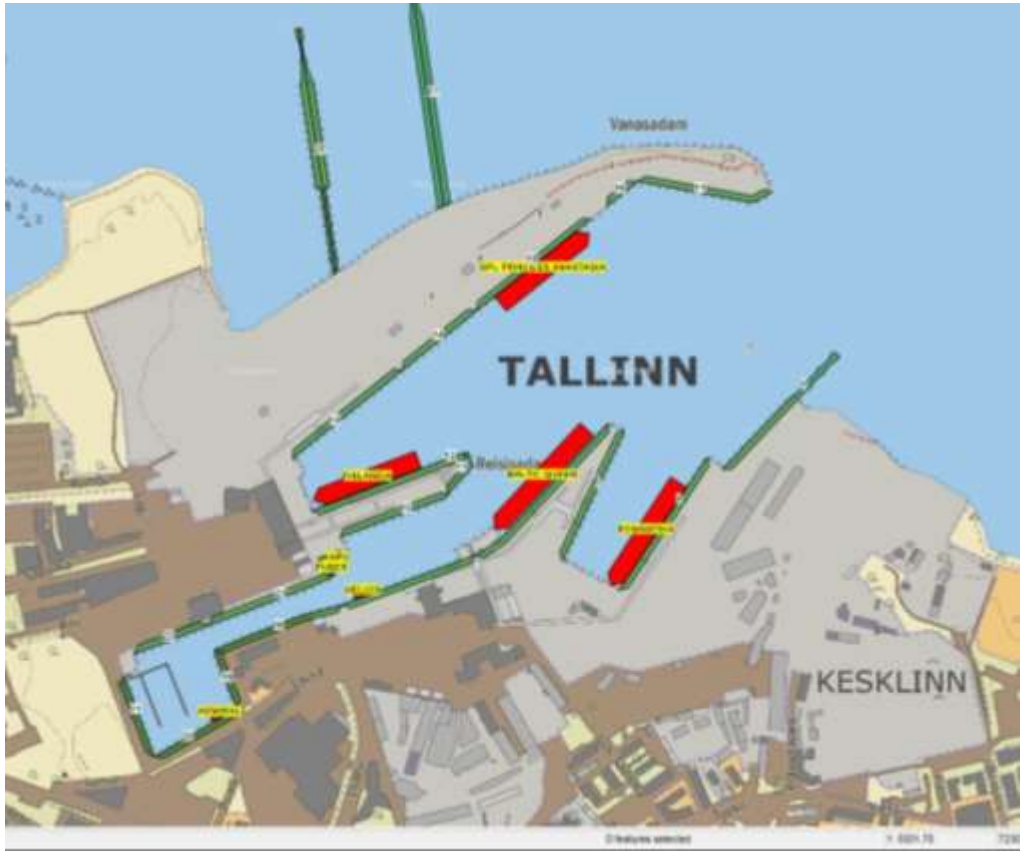
FlexPort

as Port of Tallinn's administration program

- From 2011 we use a port management program **FlexPort**, which is based on enterprise resource planning platform **Microsoft Dynamics AX 2009**
- Integrates **operational data** and **financial records**
- Due to integration of different data it's also possible to display **ships' graphic placement** in the port and get **weather extracts**



Also enables to:

- Register **vessel calls** and their **operations**
- Upload relevant **documents to every call**
- Keep track on **handled goods** independently
- Calculate and issue **invoices**
- Get reports and **statistics**

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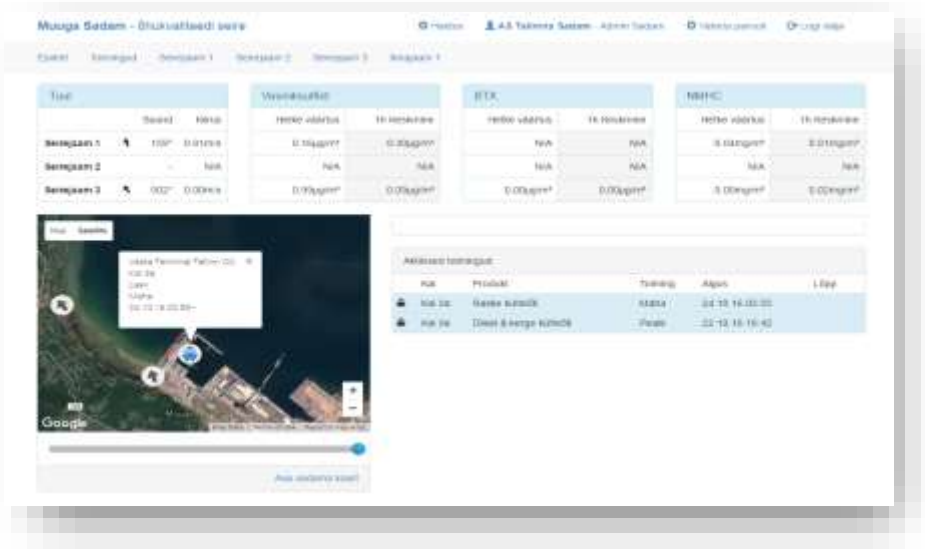
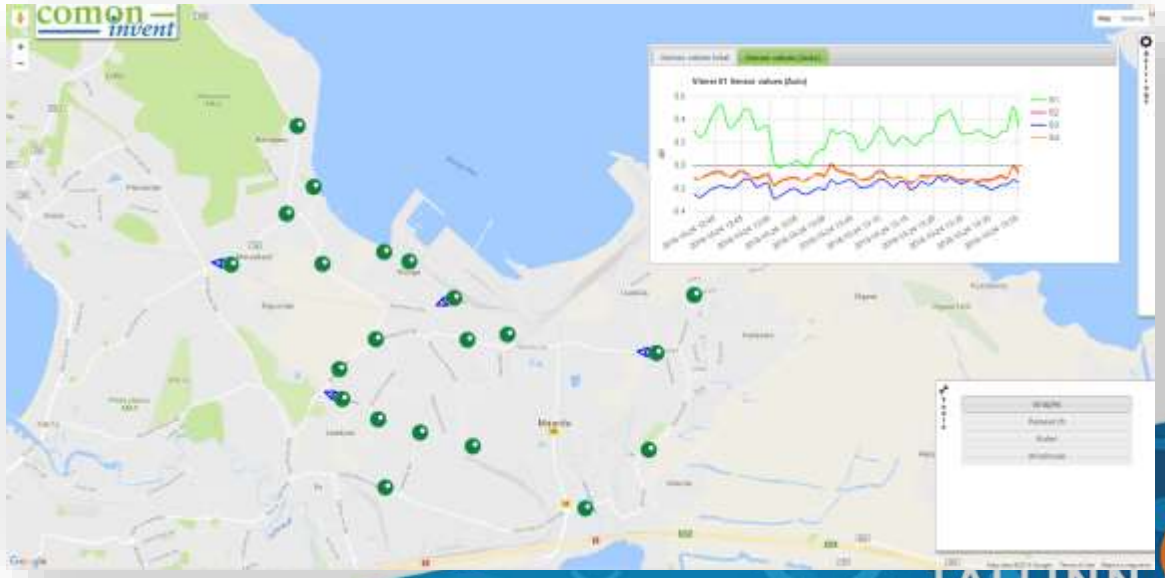
MAIRIS / e-Nose system

Monitoring air quality & detecting anomalies

- **Reducing** the risk of **odour nuisance**
- **Detecting** anomalies in air composition caused by the presence of reactive trace gases
- Getting updated info about the sources of anomalies – **24/7 online data, 1 minute frequency**
- **Pilot project** – a Network of 20 eNoses





TALLINN

RAIL BALTIC

CARGO TERMINAL

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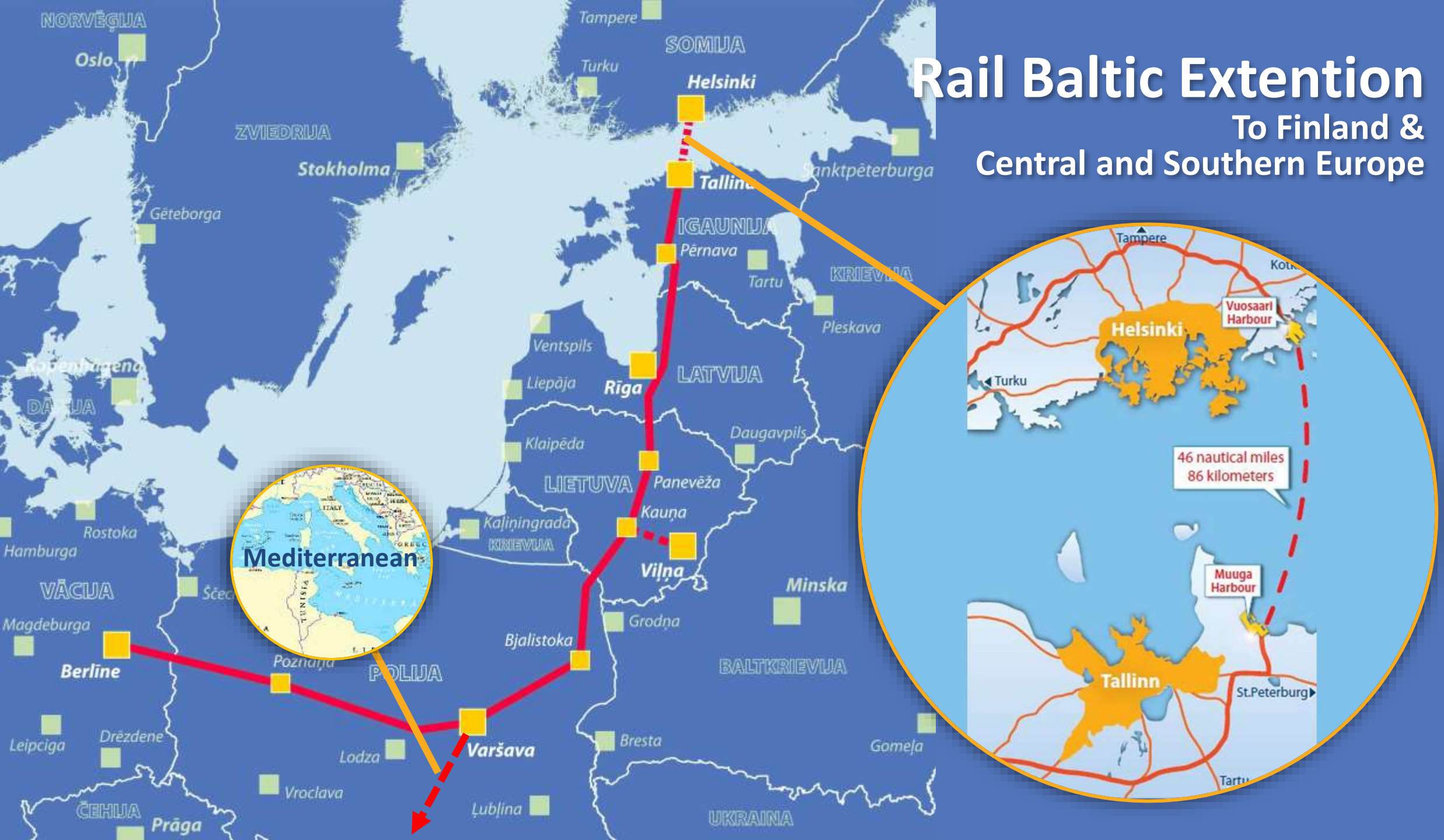
Rail Baltic Extention

To Finland & Central and Southern Europe



Muuga Harbour:
Smart Hub

Muuga:

A Multimodal Transport Hub, where **Smart Technology**, different **Railroads** (1520 & 1435), **Land transport** and **Shipping** Meet
+ the Closeness
of Tallinn **Airport**

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Port of Tallinn – New Approach

Initial Public Offering (IPO)

The owner of Port of Tallinn, the Government of the Republic of Estonia has decided to proceed with listing up to 30 percent of company's shares on the Estonian stock market.

Deadline: Listing shares on the stock market by the **end of the first half of 2018** at the latest.

Main purposes for the country:

- Getting as many local retail and institutional investors as possible
- Growing the liquidity and attractiveness of Nasdaq Tallinn
- Selling the shares with an optimal price = maximizing company's market capitalization
- Conducting IPO effectively and in due time

Main purposes for the company:

- Allowing for the company to focus more clearly on its business domains
- Improving the company's as well as Estonia's international reputation
- Becoming even more transparent

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Thank You!

www.portoftallinn.com

ECOPORTS FOUNDATION

ISO 9001
ISO 14001
BUREAU VERITAS Certification