“The vision to become the most climate-smart port of the Baltic”

Copenhagen 20141007

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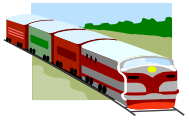
The Port of Trelleborg

Largest Ro-Ro-port in Scandinavia

Second in Sweden in terms of cargo volumes in ton

Second in Sweden regarding ferry port calls



The largest railway port in the Baltic Sea's

The largest rail ferries in the world

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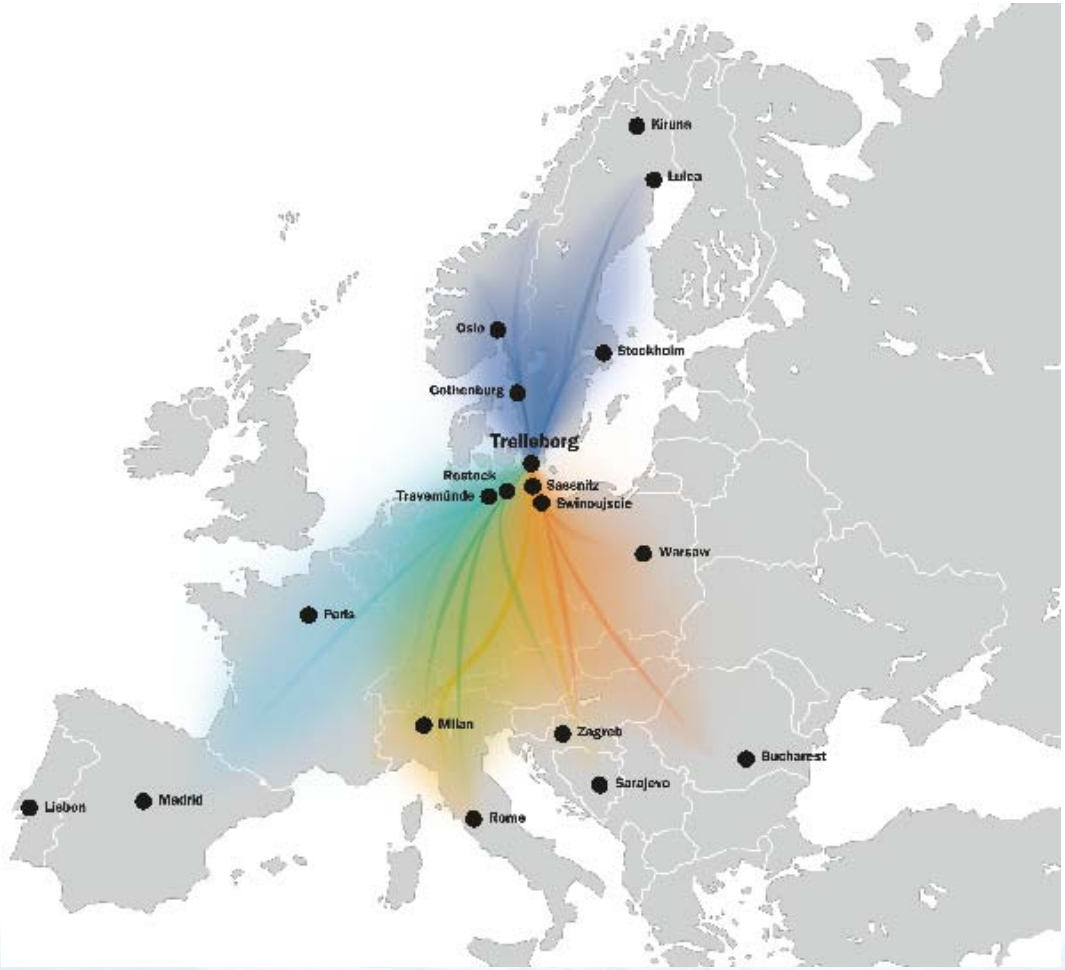
Four corridors

TT-Line
Trelleborg–Travemünde Trelleborg–Rostock

Stena Line

UNITY LINE



Challenges

- **Further development was difficult** within “old” infrastructure
- **Market needs** (longer and wider vessels), **regulations** from authorities
- **Competitors and partners** could offer according to the market needs
- **New environmental rules**
  - 0,1 % sulphur (IMO)
  - 20 % CO2- reduction for vessels (EU)
  - Waste water
  - NOx

Environmental Goals

To become the most climate-smart port of the Baltic Sea

- To develop the port with a sustainable approach
- To give tools to the maritime industry to improve their environmental performance
- To determine internal and external environmental targets
- To participate or manage environmental projects
- To develop the Port and the City in harmony

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The City, Environment & Port

Internal work

Efficient port logistics:

- Emissions to air and water, noise
- High service and rational internal port logistics

Good environmental performance of vehicles & misc. equipment

- Renew vehicle and other equipment so that environmental performance is at the forefront of technological developments

Environmental activities

- Constantly working to adapt the business environment in terms of energy, water, chemicals, hazardous waste

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Environmental measures - Port vehicles

- **New loco tractor**

  Emissions reduced by approx 50%.

- **Ad-Blue Catalyst**

  Clean the exhausts from **tugmasters**, by decomposing particles

- **Eco-driving – training of all personnel**

  Less fuel and stress

- **IT system - integration with customer systems**

  Less fuel, stress, and better control

- **Reduced noise levels** of terminal tractors and stackers through various technical measures, such as extra insulation, noise absorbers/traps

- **Particulate filters in tugmasters**

  Removes particles by almost 100%

- **Engine speed regulation for tugmasters**

  Less fuel and accidents

- **Electric trucks**

  Less emissions and noise.

- **New Bus**

Co-financed by the European Union
Trans-European Transport Network (TEN-T)

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Baltic Sea Region Programme 2007–2013

SEVENTH FRAMEWORK PROGRAMME

GREEN EFFORTS port innovation

Loco tractor

Better Environment

- **less noise**
- **less CO_2**
- **less PM**
- **less NOx**

Flexible

Environmental measures - Ferry terminals

- **<u>Onshore power supply</u> (OPS). Improvement of air quality and noise reduction**
  - **OPS is available in all ferry berths in regular use**
  - **When in full operation we estimate that the port will use 7-10 MW daily.**

- **<u>Port reception facilities</u> (PRF) for ship-generated sewage**
  - **PRF's in all berths**
  - **Permanent PRF's directly connected pipes to the city's sewage treatment plant**
  - **Black- and grey water reception**
  - **PRF's were included in the CleanShip project as a pilot and the investment was financed by NIB (Nordic Investment Bank)**

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Different funding projects

Project name	Finansiär	Aktiviteter
Vision 2005	European commission, Ten-Application	Logistic terminal, intermodal terminal, Berth with railway track
PORTKORT	European commission, Ten-Application	Loading system for computer in the tugmster
MOS Königslinie	European commission, Ten-Application	New berth for railway traffic
Cleanship	European commission, Baltic Sea Sea Region	Studies/planning, OPS, waste water
NIB	Nordiska Investerings Banken	Investment for waste water / storm water
Green EFFORTS	European Commission, Ten-T Application	CO2 footprint, survey of our process
MOS GreenBridge	European Commission, Ten-T Application	Part of: breakwater, dredging, new berth, intermodal terminal
Swiftly Green	European Commission, Ten-T Application	G4NC, intermodal traffic, marketing of best practice. Environmental project
Statens energimyndighet	Statens energimyndighet	Wind power
MOS Polen	European Commission, Ten-T Application	Part of: breakwater, dredging fairway, intermodal terminal
MOS LNG	European Commission, Ten-T Application	Studies/planning for LNG berth and routines for LNG

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Problems/Questions

Onshore power supply:	Cost for the fuse
0.1 % sulphur:	Who will be responsible for control?
Waste water:	Acceptance from the city of the water quality
Competition:	Environmental vs. non environmental port
Mandatory:	To use OPS, waste water etc
Demand of Rebate:	From vessel owners

Environmental measures - Energy optimization

Reduced use of energy and natural resources - since 2011

- **Replacement** of tube fittings and lamps within the Logistics centre
  - 28 000 kWh/year.
- **Lighting masts,** 429 modern armatures are installed on lighting masts
  -1 million kWh/year

- **Automatic lighting control at berths 8-9**
  Dimmer equipment on lighting masts
  - 42 000 kWh/year
- **District heating**
  Switching of heat system from gas to district heating in the large buildings
- **Ventilation in our buildings**
  Installation of timers and adjustment of times

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Pilot
Environmental measures for green & clean energy

- **Solar energy**

Red navigation lighthouse is supplied with solar energy through 10 solar panels

- **Wind energy**

Establishment of six 3 MW wind mills

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Cleaning of stormwater

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Future Projects

Thank you !

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