



Environmental activities and smartPORT Hamburg

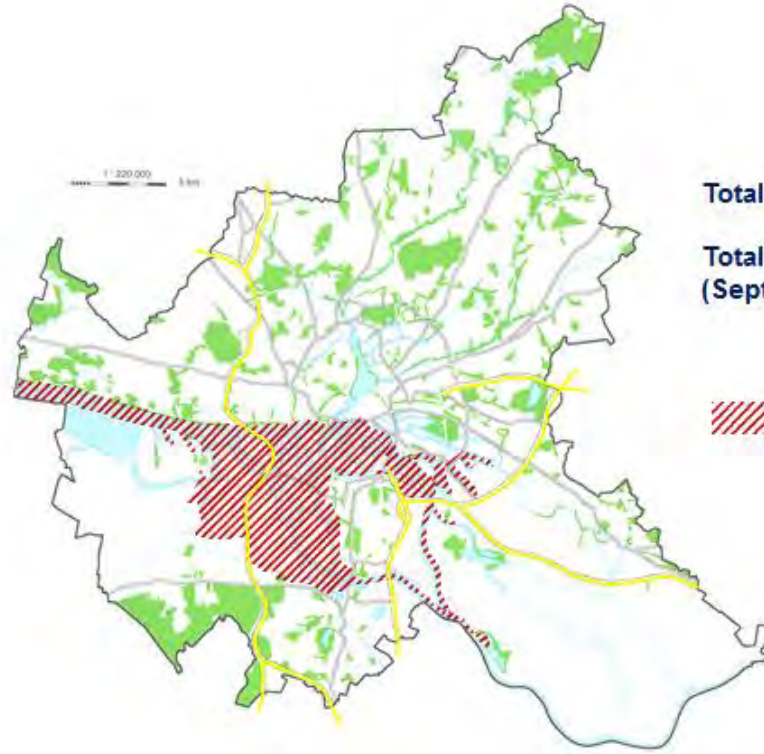
Our Port – in the middle of the city – has its special challenges



Source: www.mediaserver.hamburg.de/C.O.Bruch



City of Hamburg



Total area: 755.30 square kilometres

**Total population: 1,748,788
(September 2013)**

 **Size of Port: 74.40 square kilometres = 10% of total area of Hamburg**

Environmental activities of HPA

Energy-efficient technology for industrial buildings



Draft port railway location (Quelle: Planungsgruppe Gestering, Knipping, de Vries)

- HPA has built for the port railway a new office and a depot with a high standard of energy saving (finish 2014)
- Depot
Energy consumption is 30 % lower than the regulatory requirements (EnEV 2009)
- Office
Passiv house standard
(heat requirement 15 kWh/m²*a)

Energy-efficient technology for industrial buildings New office port railway



Office port railway (Photo: HPA)

- High thermal insulation of the building according to the passive house standard
- Power supply by the photovoltaic system from the depot (188 kWp)
- Heating and cooling with geothermal energy
- Ventilation system with heat recovery (more than 90%)
- Water heating with solar collectors
- Small gas boiler only to cover peak loads
- Central control with Building Management System (Priva)

HPA electro mobility



- first electric car of type e-Fiat Fiorino since May 2011
- 7 e-cars new cars since August 2014
- 2 more since May 2015
- part of federal funding program
- 100 charging points in Hamburg on urban public spaces

Onshore power facility at the cruise terminal Altona – Transformer Station



Source: HPA

Cruise Terminal

- 1 berth
- Capable for cruise vessels up to 300m
- Within city area of Altona
- Hiking trail along the Elbe

Power generating plant

- 12 MVA
- Conversion from 50 Hz to 60 Hz
- 6,6 kV 60 Hz, 11 kV 60 Hz
- 10 Mio € invest



Co-financed by the European Union

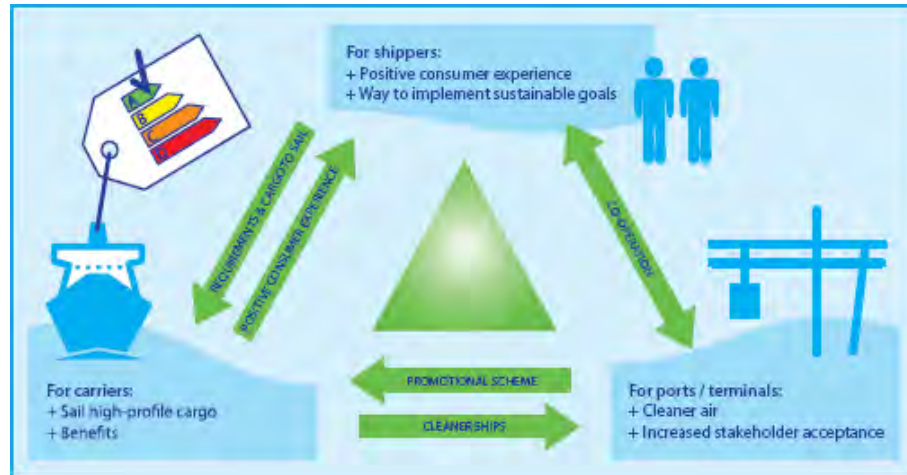
Trans-European Transport Network (TEN-T)

Innovations for noise reduction



- Information of public, stakeholder
- Voluntary measures:
 - * Regular conversations with companies, authorities and affected population
 - * construction of noise barriers
 - * noise-reducing techniques at construction sites
 - * Modern terminal equipment

Environmental Ship Index (ESI)



- Introduction of ESI in harbour dues on 1st July 2011
- Incentives for environmental behavior
- Voluntary system, more than 3,000 ships registered
- app. 30 incentive providers

Environmental component at port railway



- Introduction in railway tariff system on 1st January 2011
- Discount for:
 - * wagons with noise reducing brakes
 - * soot filter

Sustainability report of HPA



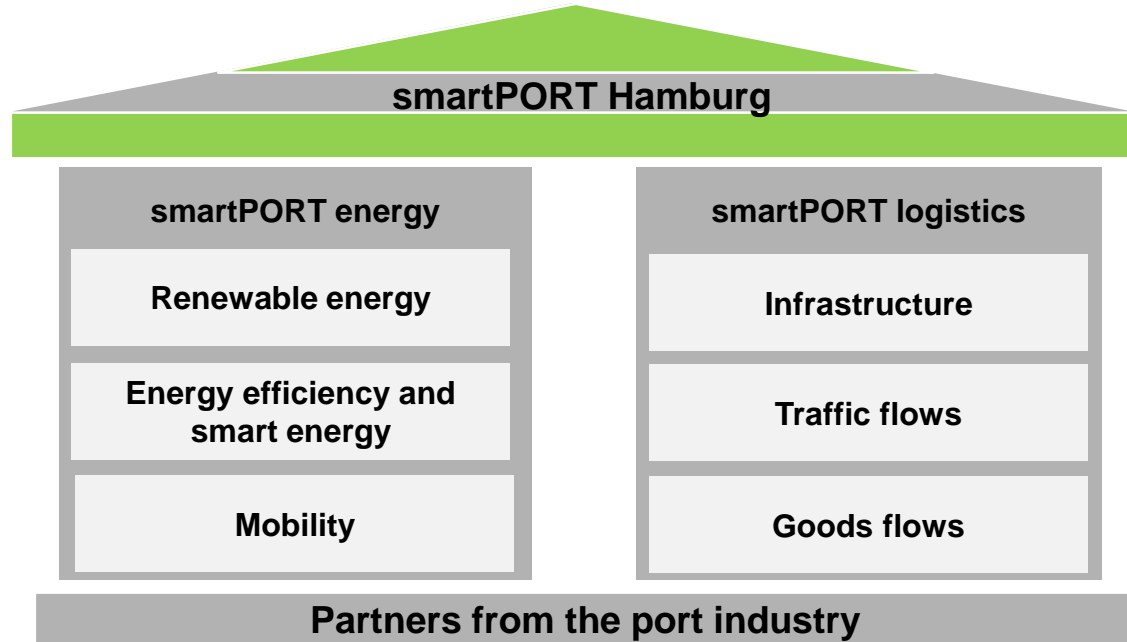
Sustainability report of HPA:

- started in 2012
- published in 2013
- C+ standard GRI (Global Reporting Initiative)
- report to be updated every two years
- Next report will be published in August
- New GRI standard 4.0

G R I

Source: HPA

The Port will become more intelligent with smartPORT Hamburg



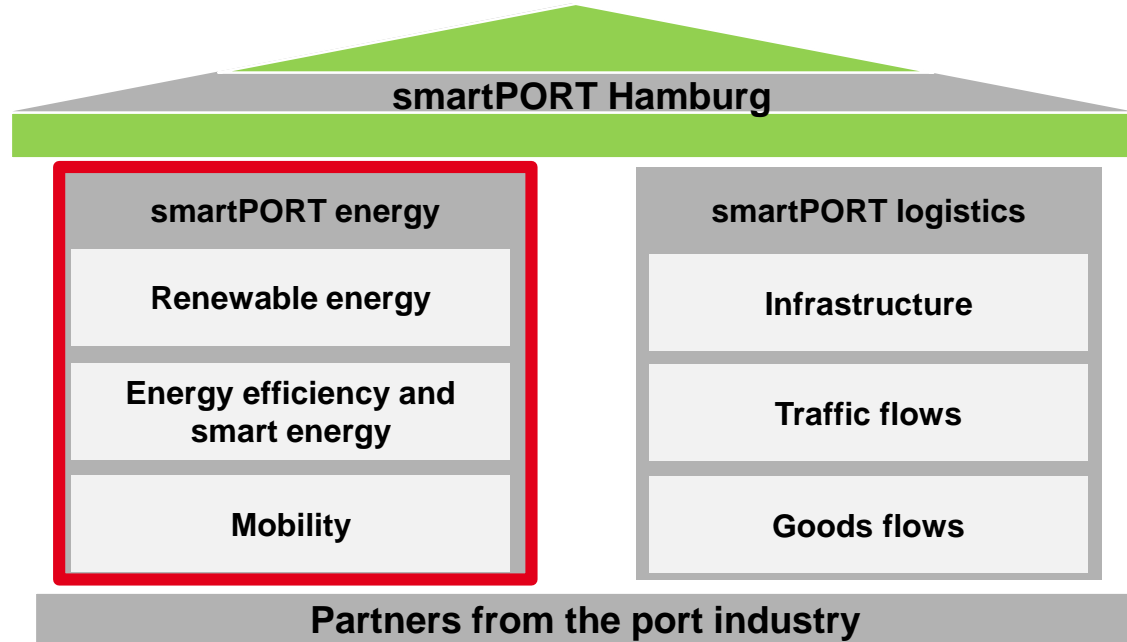
Source: HPA

The Port will become more intelligent with smartPORT Hamburg



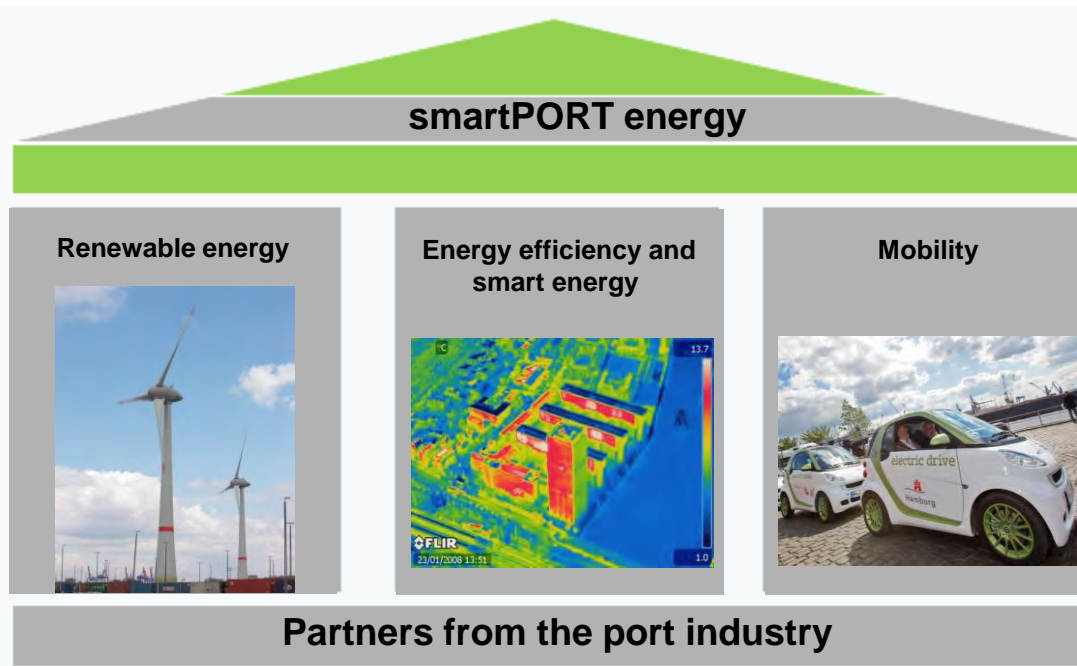
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Energy transition in the Port of Hamburg



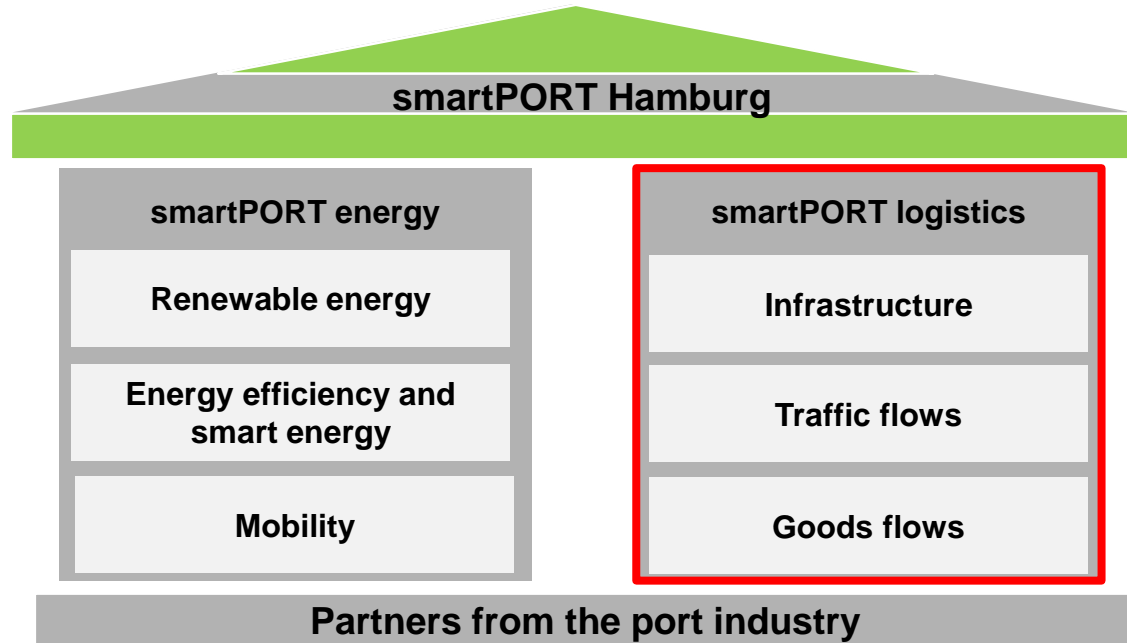
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smartPORT logistics – Showcase for environmental technologies



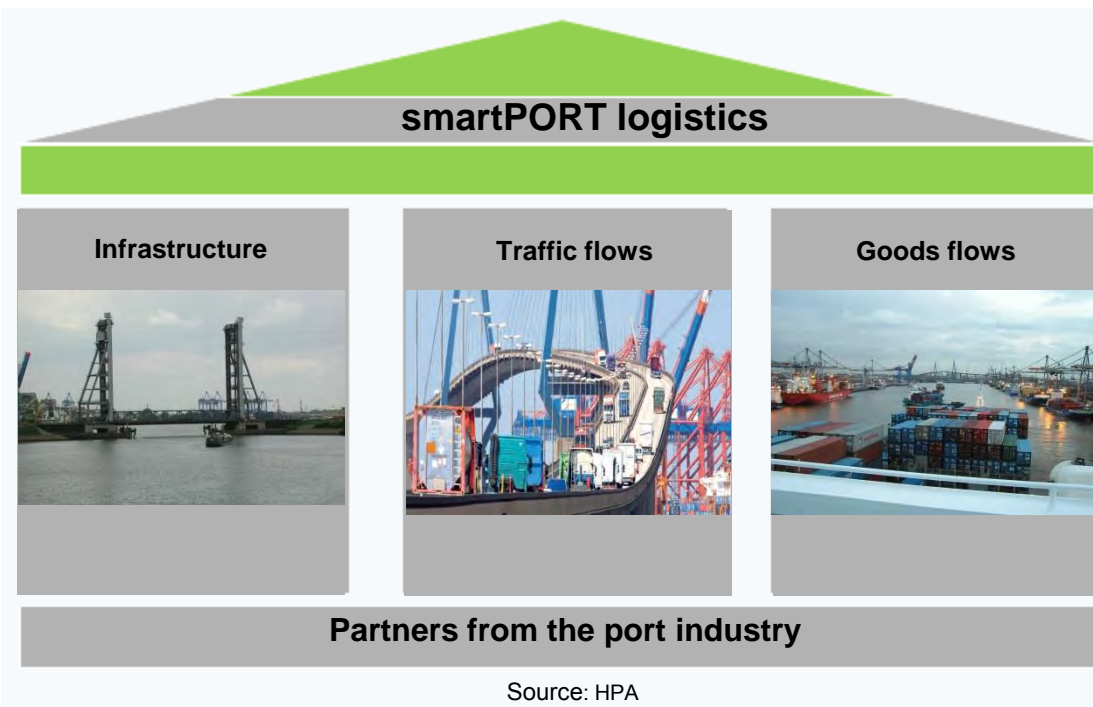
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Energy transition in the Port of Hamburg: Showcase for environmental technologies

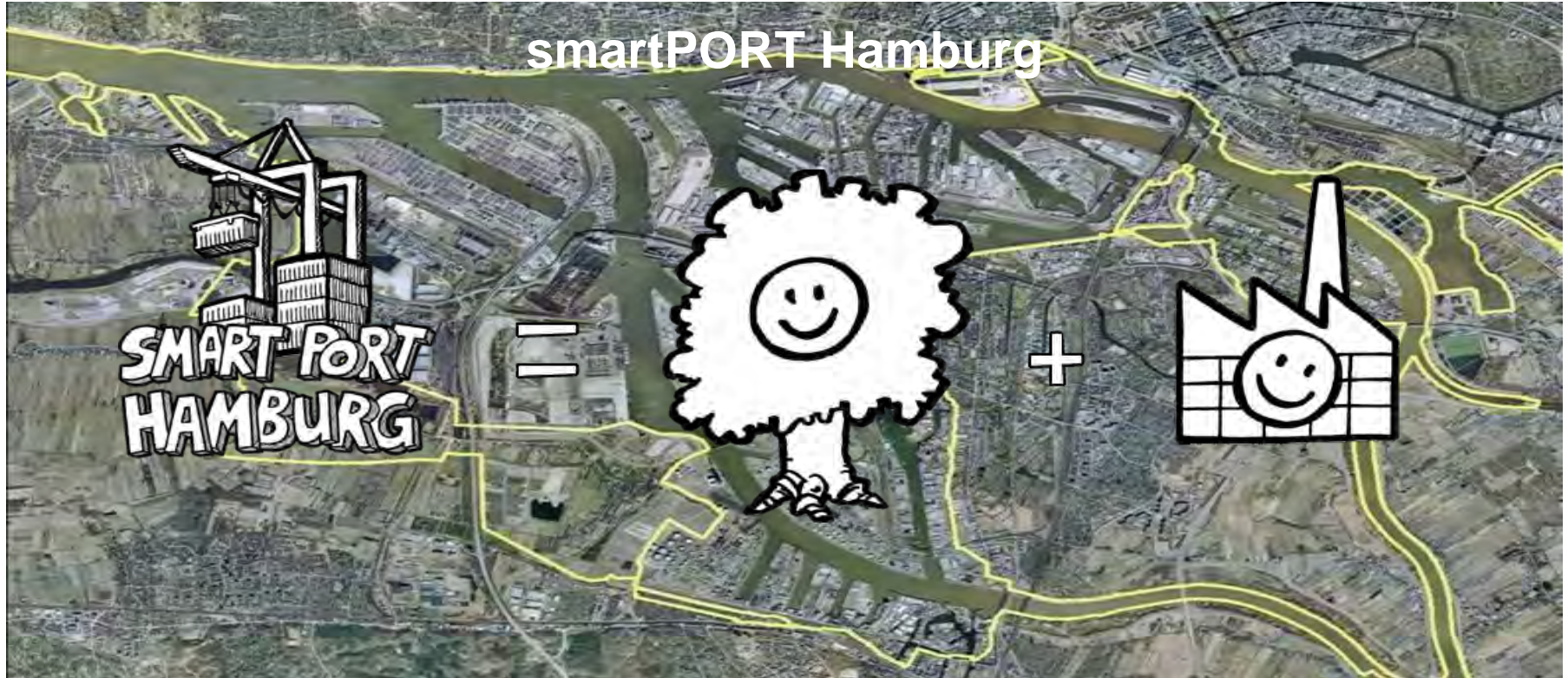


Source: HPA

smartPORT logistics – Showcase for environmental technologies



smartPORT Hamburg



Thank you for your attention !



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