Greening Ports

Noise and light reduction

Ton van Breemen, 1 June 2015, Hamburg

Introduction

- **Inventory**
- **Sea Ports Amsterdam**
- **Noise reduction**
- **Light reduction**
- **Conclusions**

Port of Amsterdam

Multi-purpose port

Oil

Bulk

Cruise

Food

Containers

Coal

Rail

Logistics

Soft commodities

Air-Sea Freight

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Port of Amsterdam key facts

General information

- World nr. 1 cocoa port
- Europe's nr. 1 petrol port
- Europe's nr. 2 coal port
- Nr. 4 sea port in West-Europe
- Top 10 cruise destination of Europe

Port area region	4,500 HA
Port area Amsterdam (land+water)	2,600 HA
Income (turnover)	€ 135 million
Yearly investment	€ 18,8 million
Yearly investment port business community	€ 500 million
Personnel Port of Amsterdam	355
Employment NSCA (direct + indirect)	**66,378**
Number of companies in port area	2,165
Throughput region	97,4 million tons
New land leased	4 HA
Added value maritime industry	€ 6.2 billion

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Sustainable port

- Vision
  - Intensify use of space: twice the volume on same land usage

- Intermodal transport
  - Less CO2, optimisation, use of barge and rail, smart, innovative operations

- Wind farm
  - Largest *on land* capacity generation in Europe 65 megawatts energy
  - Generates enough to provide 40,000 house holds

- Power plants
  - Waste converted into electricity
  - Generates 124 megawatts energy

- Commercial bio energy producers in the port
  - Blue Ocean (bio diesel components)
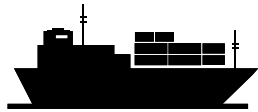 - Greenmills (recycling edible oils and waste)

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Sustainability: modal split

	1990 – 2010 - 2030	
🚚	80% ▸ 59% ▸ 35%	2x
🚢	15% ▸ 31% ▸ 45%	4x
🚃	5% ▸ 10% ▸ 20%	6x

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Ambitions Port Vision 2008 - 2020

- Second large sea lock

- +15% employment by 2020

- Start Sustainability & Innovation Fund of € 2 million a year

- Decrease road transport , increase water and rail transport
  (resp. from 53, 43 and 4% in 2006 to 45, 49 en 6% in 2020)

- Drive back CO_2 emission by 40% with regard to 1990

- Stimulate vessels to use cleaner fuels and cold ironing

- Attract companies which transship and produce sustainable biomass and bio fuels

- Double throughput on existing port grounds
  (from 61 million tonnes in 2006 to 125 million tonnes in 2020)

- Efficient use of available and reclaimed space

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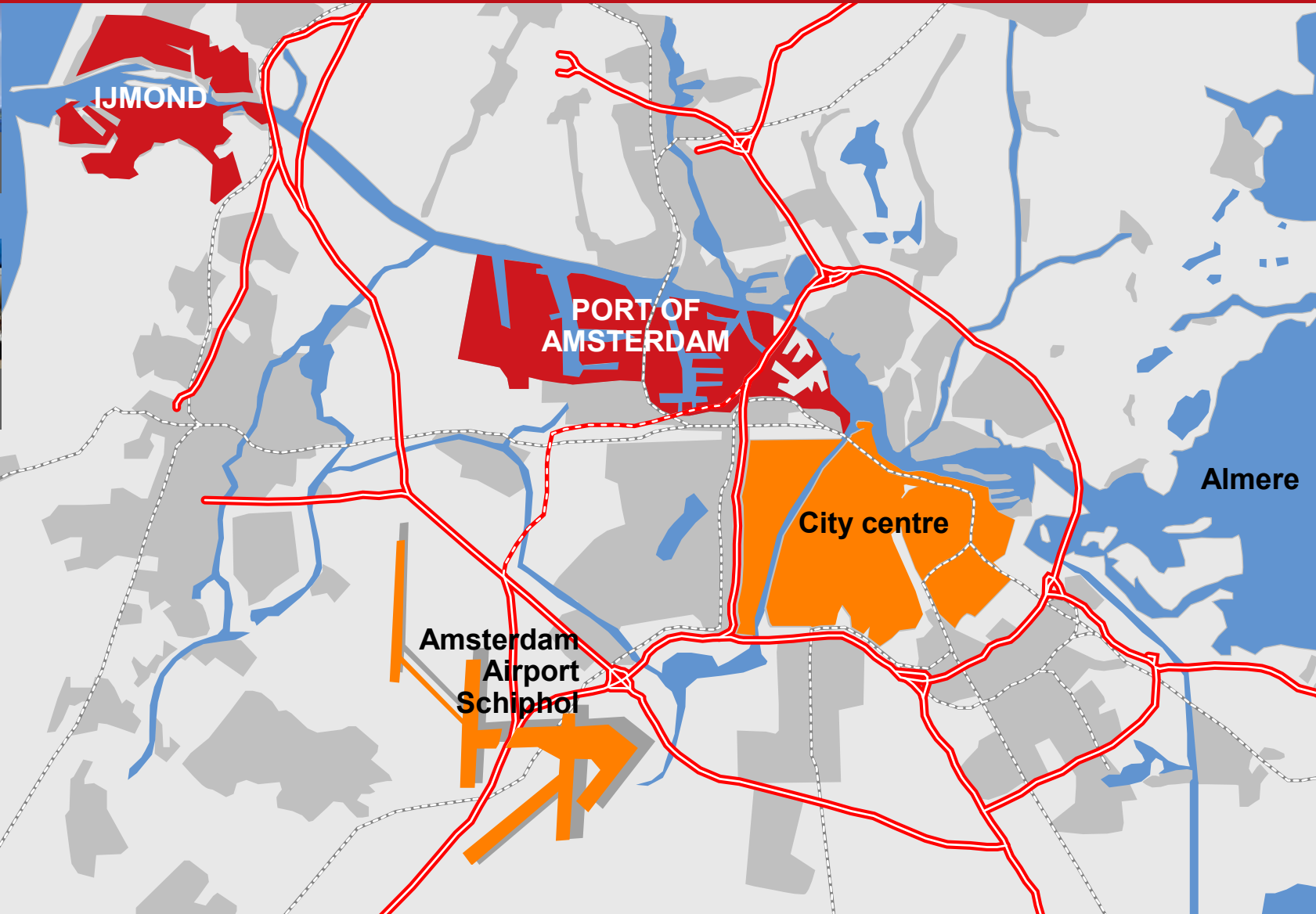
Airport-Seaport-City combination

4th European seaport

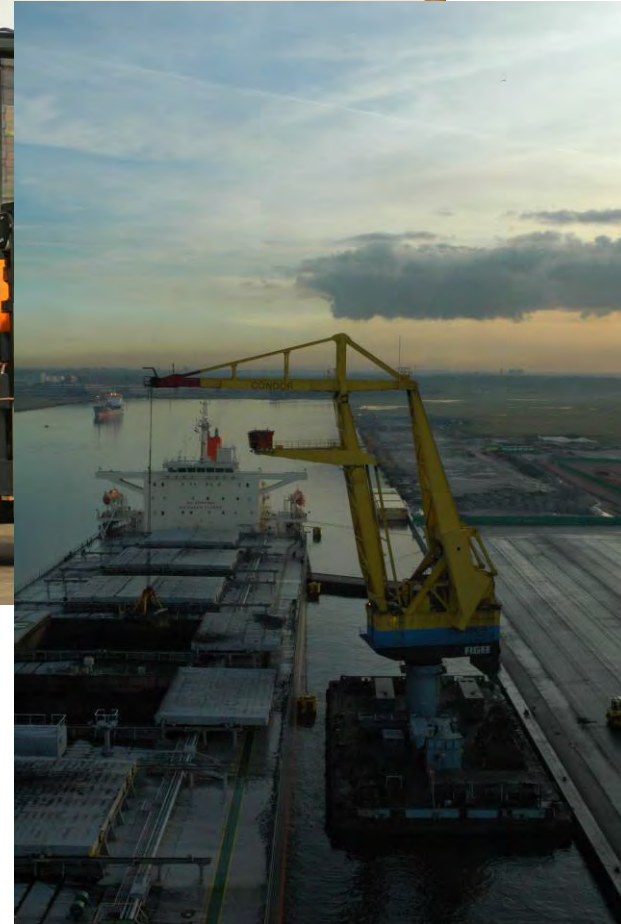
4th European airport

Largest European Internet Exchange

Largest Dutch services city

IJMOND

PORT OF AMSTERDAM

City centre

Almere

Amsterdam Airport Schiphol

Waterway   Highway   Railway

Noise reduction at source

- **Distance**
- **Low emissions**
- **At reciever**
  - **Isolation**
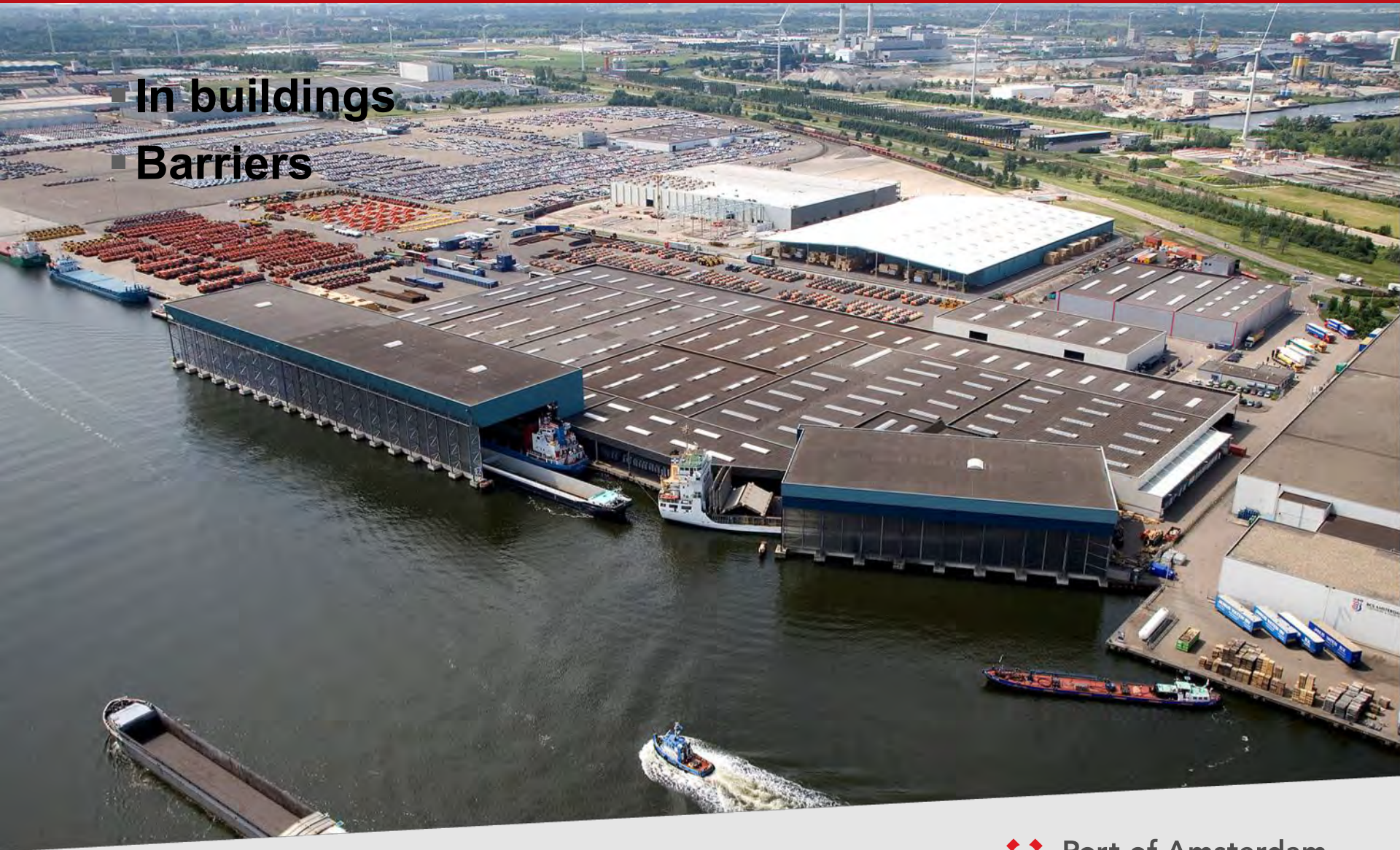 - **Trees**
  - **Masking**

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Noise reduction at source

Tonal sound of machinery can be replaced by broad band noise
Port of Amsterdam is setting up project for replacements

https://www.youtube.com/watch?v=iO6mWwT1xcQ

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Noise reduction transmission

- In buildings
- Barriers

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Noise reduction at reciever

- **Isolation**
- **Trees**
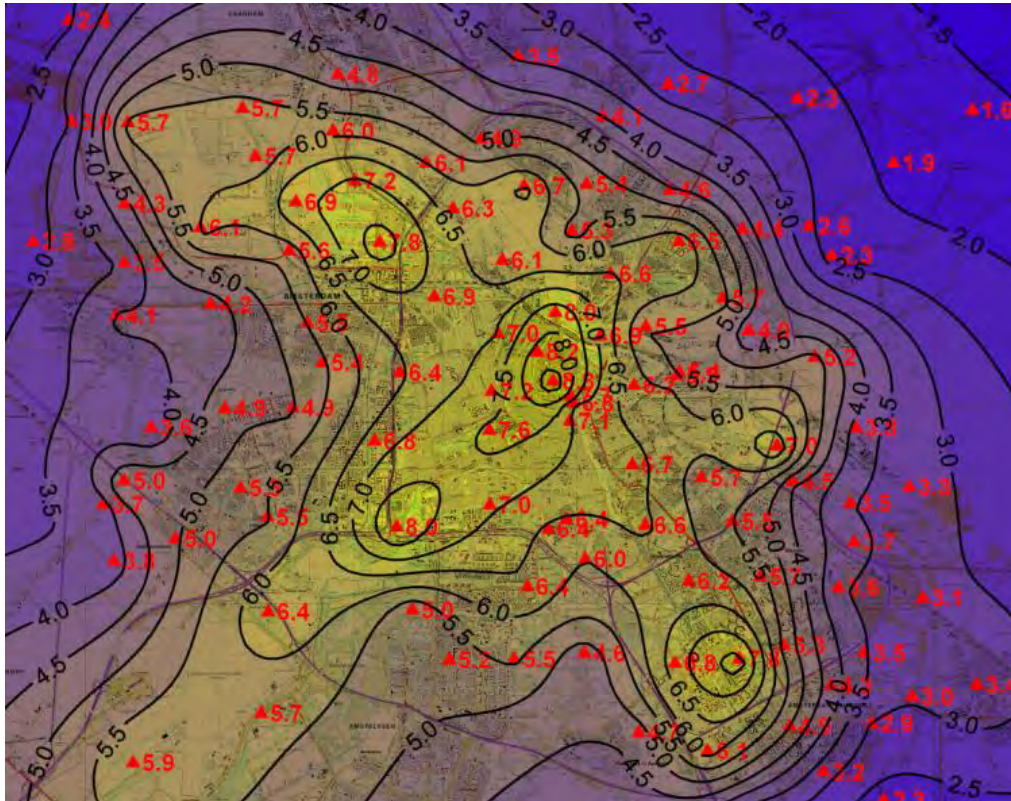- **Masking**

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Noise reduction regulations

- **EU regulations => BREF's**
- **National legislations => permits with noise levels**
- **Industrial noise is reduced**
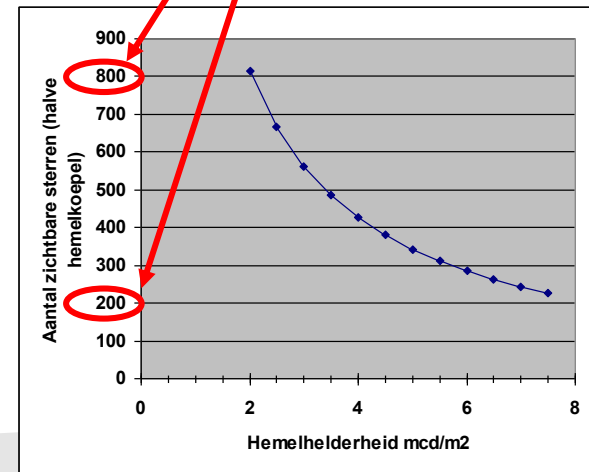- **Sea ships no noise regulations!**

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Sky brightness measurements

Green hart of Holland 4.000 – 5.000 visible stars

Amsterdam: number of visible stars

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Light reduction

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Conclusions

- **Seaports are essential for transport**
- **Noise from companies already partly reduced**
- **Noise from see ships needs attention**
- **Raising awareness is an import and efficient tool**

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