Study Visit and Training Course
On Intermodal Transport Statistics
Port of Rotterdam Authority
29 November 2011

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1 Port area
2 Facts & figures
3 Key characteristics
4 Developments
5 Sustainability
1 The port of Rotterdam

Port area

1 Rotterdam Port Authority

- Landlord port
- Traffic management
2 Facts & figures

- Top 20 World Ports
- Top 20 World Container Ports
- Top 20 European Ports
- Top 20 European Container Ports
- Throughput development Hamburg - Le Havre range
- Throughput development Rotterdam
- Market share Hamburg - Le Havre range
2 Cargo portfolio

- **Total throughput**: 429.9 million tons (+11.1%)
- **Dry bulk cargo**: 84.5 million tons (+27%)
- **Liquid bulk cargo**: 209.3 million tons (+5.7%)
- **Containers (11.1 mln TEU)**: 112.2 million tons (+12%)
- **Other general cargo**: 23.6 million tons (+7.9%)

2 Top 20 World ports 2010

**Total throughput (Mtons)**

Unit: Gross weight x 1 million metric tons
2 Top 20 World container ports 2010
Container throughput (TEU)

Top 20 European ports 2010
Total throughput (Mtons)
Top 20 European container ports 2010
Container throughput (TEU)

Container throughput development
Hamburg - Le Havre range (TEU)

Unit: Number x 1 million TEU’s
Facts & Figures
2 Container throughput development
Port of Rotterdam (TEU)

Unit: Number x 1 million TEU's

2 Market share Hamburg - Le Havre range
Container throughput in % (2010)
3 Key characteristics

- Nautical accessibility
- Container Terminals
- Gateway port
  - Hinterland connections
- Transhipment hub

3 Nautical accessibility

- Directly on the North Sea, with 24/7 unrestricted access
- Unparalleled turnaround times

<table>
<thead>
<tr>
<th>Port</th>
<th>Sailing time pilot to berth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotterdam Maasvlakte</td>
<td>2 hours</td>
</tr>
<tr>
<td>Hamburg</td>
<td>12 hours</td>
</tr>
<tr>
<td>Antwerp</td>
<td>12 hours</td>
</tr>
</tbody>
</table>
3 Nautical accessibility (2)

- No draft restrictions or tidal windows for the port of Rotterdam.

- Antwerp*: 11.90 m
- Hamburg*: 12.80 m
- Amsterdam: 13.70 m
- Rotterdam: > 19 m

* = port with tidal window

Key characteristics

3 Maasvlakte terminals

1. ECT Delta Terminal
2. APM Terminals
3. Euromax
3 City terminals

1. ECT City Terminal
2. Rotterdam Shortsea Terminals
3. Uniport

3 Gateway to hinterland with 300 million consumers
3 Hinterland strategy

- Aim: increase modal shift and market share in hinterland regions
- Approach: strengthen hinterland network via increased intermodal connectivity
  - Landlord in hinterland
  - Increased chain efficiency
  - InlandLinks quality mark inland terminals
  - Rail and inland shipping program
3 Excellent rail connections

<table>
<thead>
<tr>
<th>Country</th>
<th>Weekly frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany, Switzerland &amp; Austria</td>
<td>148</td>
</tr>
<tr>
<td>Benelux</td>
<td>65</td>
</tr>
<tr>
<td>Italy &amp; France</td>
<td>59</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>44</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>316</strong></td>
</tr>
</tbody>
</table>

3 Train concepts I

- Container trains (shuttles)
3 Train concepts II

- Bloc trains
  - Dry bulk: coal, ore, corn
  - Liquid bulk: chemicals, edible oils

3 Train concepts III

- General cargo trains (refrigerators, paper rolls)
### 3 Betuwe Route

**What**
- 160 km of dedicated rail freight line
- from the port of Rotterdam to the German rail network
- Operational since June 2007
- Performance 2011 (ytd): ±500 trains per week

**Benefits**
- Increased rail capacity
- No delays between the port of Rotterdam and the German border
- Safe and clean mode of transport
- Quick transit times
  - Port of Rotterdam -> German border: 3 hrs
  - Port of Rotterdam -> Germany’s Ruhr area: 4 hrs

**Key characteristics**
- www.inlandlinks.eu

### 3 Extensive inland terminal network - Extended gates & transferia

**Benefits**
- Efficient, reliable and fast connection with deepsea terminals
  - Inland terminals become an extension of deepsea terminals
  - Daily barge and/or rail connections to/from deepsea terminals
  - Bypassing road traffic delays
  - Improved utilisation of terminal capacity
- Environmentally friendly
  - reducing CO$_2$ emissions

www.inlandlinks.eu
3 Extended gates

Key characteristics

3 Container Transferium Alphen

Why?
- Improving accessibility of the port
- Reducing CO₂ emissions
- Cheaper and more reliable connection to the port

What?
- Largest barge-connected inland terminal in the Netherlands
- Operational since Oct. 2010
- High-frequency barge connections to/from Maasvlakte

Planned developments
- Terminal expansion operational end 2011
Rail and inland shipping program

Key characteristics

3 Ideal transhipment hub

Why?

- All major shipping lines have weekly services calling at Rotterdam
- High ratio of "First/Last Port of Call" services
  - 64 deepsea weekly services call at Rotterdam
  - 29 have Rotterdam as first port of call
  - 10 have Rotterdam as last port of call
- Large number of feeder connections
3 Weekly deepsea liner services

Key characteristics

Middle East & Asia 31
Australia 2
Africa 4
Middle & South America 19
North America 8

3 Shortsea & feeder connections

<table>
<thead>
<tr>
<th>Country</th>
<th>Weekly frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK &amp; Ireland</td>
<td>85</td>
</tr>
<tr>
<td>Scandinavia &amp; Iceland</td>
<td>27</td>
</tr>
<tr>
<td>Baltic &amp; Russia</td>
<td>27</td>
</tr>
<tr>
<td>Mediterranean</td>
<td>22</td>
</tr>
<tr>
<td>Spain &amp; Portugal</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>178</td>
</tr>
</tbody>
</table>
3 State-of-the-art Port Community System

What?
- A neutral and reliable information hub for all logistical information in the port

Why?
- To align, improve and simplify the exchange of information

Advantages
- Simple and efficient information exchange
- Optimized logistical processes
- Cost reduction

More info at: www.portbase.com

4 Developments

- Maasvlakte 2
- Rotterdam Cool Port
- Container Transferium Alblasserdam
- Expansion A15 highway
- Plans for a new tunnel
### Maasvlakte 2 - Room for Growth

<table>
<thead>
<tr>
<th>Development</th>
<th>Area (ha)</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Euromax (MV1)</td>
<td>115</td>
<td>2013</td>
</tr>
<tr>
<td>Euromax (MV2)</td>
<td>84</td>
<td>2014</td>
</tr>
<tr>
<td>T1 - RWG (MV2)</td>
<td>156</td>
<td>2013</td>
</tr>
<tr>
<td>T2 - APMT (MV2)</td>
<td>167</td>
<td>2014</td>
</tr>
<tr>
<td>T3/T4 (MV2)</td>
<td>156</td>
<td></td>
</tr>
</tbody>
</table>
4 Shipping lines commit to Rotterdam

- **Euromax MV1**
  - ECT & Cosco, K-Line, Yang Ming & Hanjin (CKYH)

- **APM Terminals MV2**
  - APM Terminals & Maersk Line

- **Rotterdam World Gateway**
  - DP World, APL, MOL, HMM & CMA-CGM

4 Rotterdam Cool Port - Central hub for perishables

Free artist impression
## 4 Rotterdam Cool Port - Central hub for perishables

**Why?**
- Ongoing containerisation of perishable cargo
- To strengthen Rotterdam's position as central hub for perishables

**What?**
- Complete Cool cluster in the Waal-Eemhaven area
  - Integrated in container operation
  - State-of-the-art cold store operations
  - Cross-docking facilities
  - High frequency shuttle connection with Maasvlakte
  - LCL consolidation point

**When?**
- Start construction: Q1 2014
- Operational (phase 1): Mid 2015

## 4 Container Transferium Alblasserdam

**Why?**
- Improving accessibility of the port
- Reducing CO$_2$ emissions/modal shift targets

**What?**
- Strategically located container transferium
- High-frequency barge connections to/from Maasvlakte

**When?**
- Operational: Q4 2012

**Benefits**
- Less CO$_2$ emissions
- Greater reliability and chain efficiency
4 Expansion A15 Highway

Why?
- Improving accessibility of the port
- Improving traffic safety on highway A15

What?
- Two new parallel roads will be added
- Existing lanes will be expanded from 2x2 to 2x3 lanes
- Expansion capacity: 65%
- Minimal disruption to daily traffic during construction work

When?
- Start: September 2011
- Finalised: Q4 2016

www.rijkswaterstaat.nl
4 Plans for a new tunnel

Two possible locations

Why?
- To improve accessibility of the port
- To release pressure on the A15 highway and Benelux Tunnel
- To evenly spread traffic flows on the ringway

What?
- An additional tunnel connecting Highways A15 and A20

When?
- Before 2020

Benefits
- Shorter and faster connection to the North
- Improved accessibility and chain efficiency