Rotterdam Moves: the port’s future
Erasmus Alumni Lecture

17 December 2020
Maurice Jansen MSc
ROTTERDAM: A PORT WITH A CITY

PORT OF ROTTERDAM STRETCHES 40+ KM TOWARDS THE SEA
2020 A YEAR TO REMEMBER....

COVID-19
2020 A YEAR TO REMEMBER....
MEANWHILE...
THE END TO GLOBALISATION AS WE KNOW IT?

The Great Unwinding
Covid-19 and the regionalisation of global supply chains

A report by The Economist Intelligence Unit

The pandemic adds momentum to the deglobalisation trend

Douglas Irwin 05 May 2020

Globalisation unwound

Has covid-19 killed globalisation?

The flow of people, trade and capital will be slowed

Coronavirus won’t end globalisation, but change it hugely for the better

Coronavirus will reverse globalization and create regional supply chains, economists predict

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# PORT OF ROTTERDAM SOME FACTS AND FIGURES

## Throughput in tonnage

<table>
<thead>
<tr>
<th>Type</th>
<th>2019</th>
<th>COVID-19 impact, YTD Q3 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry bulk</td>
<td>74.5 mn</td>
<td>-18.6%</td>
</tr>
<tr>
<td>Container</td>
<td>152.9 mn</td>
<td>-2.1%</td>
</tr>
<tr>
<td>Liquid bulk</td>
<td>211.2 mn</td>
<td>-10.4%</td>
</tr>
<tr>
<td>Breakbulk</td>
<td>30.8 mn</td>
<td>-9.3%</td>
</tr>
<tr>
<td>Total</td>
<td>469 mn</td>
<td>-10.6%</td>
</tr>
</tbody>
</table>

## Container volume

- **2019:**
  - 8,781,185 CONTAINERS
  - 14,810,804 TEU

## Vessel calls

- **SEA-GOING:** 29,491
- **INLAND VESSELS:** 100,000

## Employment and added value

- **385,000 jobs**
- **€45.6 billion**

Source: Port of Rotterdam, 2019 / *) Estimate UNCTAD 2020

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18-12-2020

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Erasmus Centre for Urban Port and Transport Economics
THE CHALLENGE AHEAD FOR THE PORT OF ROTTERDAM

• "The biggest challenge of the 21st century is the development and implementation of methods that at the same time strengthen the economy and improve the environment, while making optimum use of the available space.

• **Sustainability of production and consumption** processes in coastal zone areas.

• This is crucial in achieving a **minimal global footprint**.

• Dr. Ronald Waterman

New energy system needed, requires ports to lead the energy transition

20% CO2 of NL

Photo credits: Danny Cornelissen, Port of Rotterdam
PARALLEL TRACKS OF TRANSITION

**INDUSTRY**
- Hydrogen chain for industry and transport system
- Biofuel refinery
- Carbon Capture Storage

**PORT CITY**
- Maker’s District
- Local-for-local manufacturing
- Circular business models
- Entrepreneurship

**URBAN DISTRICT**
- Rotterdam Maritime Capital of Europe
- High-end maritime services

**SUPPLY CHAIN**
- Supply chains are going digital, creating visibility and control across continents

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TOWARDS LARGE SCALE HYDROGEN PRODUCTION AND NETWORK

Rotterdam aims to become the hydrogen hub for Europe

Photo credits: Port of Rotterdam
TRANSFORMING CITY PORTS INTO INCUBATORS FOR ENTREPRENEURS

1. Onderzeebootloods
2. Merwe-Vierhavens
3. Aqualab
4. Aerial view Stadshavens
5. RDM innovation dock

Photo credits 3,5: Claire Droppert
CHANGING ENVIRONMENT – CONFLICT OR CREATIVE SOLUTIONS?

- Transition is not just about technology, but primarily about cooperation and creativity on the basis of trust, tolerance and willingness to act and move forward.
- That also means that people must be (re-)skilled and educated differently than we have done before.
EXTENSIVE MARITIME INNOVATION ECOSYSTEM IS PART OF TRANSITION

Extensive maritime innovation ecosystem: R&D, incubators, accelerators, funding.

Broad fieldlab infrastructure; leading in application of disruptive technologies in port and maritime sectors

Maritime-related:
14 Master degree
8 Bachelor’s degrees
34 Vocational programmes
11,000 students
THE INNOVATION ECOSYSTEM APPROACH

- The **cluster perspective** by Porter (1990) applies to ports as well (De Langen & Haezendonck, 2012).
- Cluster theory is a model on **competition**, but as environmental management, sustainability and **corporate social responsibility** have become more important port authorities engage in stakeholder management and embraced corporate social responsibility policies.
- The switch from **competition to collaboration** is critical for survival in turbulent environments and for firm strategies (Trist, 1977).
- The **ecosystem of shared value** (Kramer & Pfitzer, 2016) is based on the idea that societal problems are too complex to solve by single actors and can only be solved by the **coordinated efforts** of those actors.

'It is important that we all pull together on this. Not only do we want to speed up the development of hydrogen in the Netherlands, we also want to make sure our country plays a pivotal role in the renewal of Northwestern Europe’s energy system.’

— Allard Castelein, COO Port of Rotterdam Authority

The ecosystem approach port cities are clusters of economic activity, which are competing in a global marketplace, however prosper on the basis of collaborative action and shared value creation within the cluster.
THANK YOU VERY MUCH
Contact details

Maurice Jansen
Erasmus University
E: M.Jansen@ese.eur.nl
T: +31 6 8101 6678
L: linkedin.com/in/mauricejansen