From Port Authority to International Port Developer
Port of Rotterdam’s International Experiences

Carlos O. Zepeda
Sr. Analyst | Project Leader
Agenda

Our roots

International Experience
Our roots

We are a publicly-owned business driven port developer

Institution(s) / Role(s)

Shareholders
- Municipal and national governments approve master plan and receive dividends

Port Authority
- Leases land
- Collects port dues
- Responsible for HSE
- Develops and maintains infrastructure

Private companies
- Provide logistics and transport services
- Provide marine services
- Process raw and intermediary products into finished and semi-finished products

City of Rotterdam
- 70% Equity stake

Netherlands Government
- 30% Equity stake

Port of Rotterdam
- Client relationship

Terminals & Industries
- Shipping Lines
- Marine Services
- Shippers

Other

- Rotterdam is a corporatised landlord port with a division between management and operations
Our roots
We manage the Rotterdam industrial port cluster

45 km long and covering 13,000 ha.

It is Europe’s biggest port with > 460 million tons of cargo

10 Biggest European Ports by Volume
Unit: million metric ton, 2017

<table>
<thead>
<tr>
<th>Port</th>
<th>Volume (million metric ton)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotterdam</td>
<td>467</td>
</tr>
<tr>
<td>Antwerp</td>
<td>224</td>
</tr>
<tr>
<td>Novorossiysk</td>
<td>148</td>
</tr>
<tr>
<td>Hamburg</td>
<td>137</td>
</tr>
<tr>
<td>Ust Luga</td>
<td>103</td>
</tr>
<tr>
<td>Algeciras</td>
<td>102</td>
</tr>
<tr>
<td>Amsterdam</td>
<td>81</td>
</tr>
<tr>
<td>Marseilles</td>
<td>80</td>
</tr>
<tr>
<td>Bremerhaven</td>
<td>74</td>
</tr>
<tr>
<td>Valencia</td>
<td>74</td>
</tr>
</tbody>
</table>
Our roots
We benefit from a large hinterland and industrial base...

Europe’s biggest industrial cluster with nearly 3,500 hectares of industrial facilities

- 5 crude oil refineries
- 45 chemical plants
- 5 vegetable oil refineries
- 6 power plants
- 4 industrial gas and water plants

Global Hub and Gateway to Europe: 500 million consumers within 24 hours reach
Our roots
... and firmly believe in clustering

- Rotterdam plays a role across most of the oil value chain
Our roots
We are a reliable port developer

- Maasvlakte 2 port development built on time and within budget
Our roots
We are an important economic engine for the Netherlands

- € 712 million in revenues in 2017
- € 187 million in profit in 2017
- 180,000 employed directly and indirectly
- € 21 billion added value (3% of Netherlands GDP)
- ± € 200 million in annual investments by the port authority
- ± € 1.5 billion in private investments annually
Agenda

Our roots

International Experience
International experience
It all began in Sohar...
International experience
Sohar has grown very rapidly on the back of industry

A solid diversified industrial base has...

**Petrochemicals**
- A petrochemical cluster developed around a 116,000 bbl/d ORPIC refinery
- Produces plastics and chemicals

**Metals**
- Includes iron ore processing plant and production facilities for iron, steel, and aluminum

**Energy & Utilities**
- 3 power plants with a total capacity of ± 1,500 MW for the port and the national grid
- Desalination plant

...driven Sohar’s impressive growth

**Sohar Throughput**
Unit: mn. metric ton

<table>
<thead>
<tr>
<th>Year</th>
<th>Dry Bulk</th>
<th>Liquid Bulk</th>
<th>General Cargo</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>4</td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>2008</td>
<td>7</td>
<td></td>
<td></td>
<td>7</td>
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<tr>
<td>2009</td>
<td>10</td>
<td></td>
<td></td>
<td>11</td>
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<tr>
<td>2010</td>
<td>11</td>
<td></td>
<td></td>
<td>29</td>
</tr>
<tr>
<td>2011</td>
<td>29</td>
<td></td>
<td></td>
<td>44</td>
</tr>
<tr>
<td>2012</td>
<td>44</td>
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<td>46</td>
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<tr>
<td>2013</td>
<td>45</td>
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<td>50</td>
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<tr>
<td>2014</td>
<td>50</td>
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<td></td>
<td>52</td>
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<tr>
<td>2015</td>
<td>52</td>
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<td></td>
<td>58</td>
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<tr>
<td>2016</td>
<td>58</td>
<td></td>
<td></td>
<td>58</td>
</tr>
<tr>
<td>2017</td>
<td>58</td>
<td></td>
<td></td>
<td>58</td>
</tr>
</tbody>
</table>

+30% increase from 2007 to 2017
International experience
... and contributed to Oman’s economic growth

Sohar has nearly doubled Oman’s trade and...

Omani Throughput by Port
Unit: mn metric ton

... generated strong socio-economic benefits

Private investments
USD billions

Employment
‘000 people
Port of Rotterdam invested in the construction of the Vale Jetty to enable the port to grow.
International experience
We now have 4 international business units

1. Participations
   - Investments in green / brownfield ports overseas with local partners

2. Consultancy
   - Advisory services in port development and management to port authorities, governments, and private companies

3. Education & Training
   - Tailored-made educational programmes for port authorities and relevant stakeholders

4. Digital Business Services
   - Development, marketing and sales of digital business solutions and services to port authorities and operators
# International experience

We have 3 participations outside our home port

<table>
<thead>
<tr>
<th>Port Description</th>
<th>Rotterdam Role</th>
</tr>
</thead>
</table>
| **Sohar Port/Freezone** | • Existing industrial gateway port  
| | • 6,000 ha. port and free zone  
| | • 58 million tons in 2017  
| | • 838,712 TEUs in 2017  
| | • 3 industrial clusters: metals, petrochemicals, utilities  
| | • 50:50 JV with the government of Oman since 2004  
| | • Rotterdam also provides advisory and capacity building services  
| **Porto Central** | • 1,800 ha. greenfield port development  
| | • Environmental licenses being procured  
| | • Ongoing discussions with prospective partners  
| | • 30% stake in the project with private Brazilian partners  
| **CearáPortos** | • Existing industrial gateway port  
| | • Operational since 2004  
| | • Deep water jetty port with 10,000 ha. industrial zone  
| | • 16 million tons in 2017  
| | • 209,204 TEUs in 2017  
| | • PoR will invest EUR 75 million for a 30% stake in the port  
| | • PoR’s partner will be the State of Ceará  
| | • Closure expected end 2018  

International experience

Pecém will become our latest participation

Pecém has experienced strong growth ....

... due partially to industry and has plenty of room for growth

Pecém Throughput
Unit: mn. metric ton

- Containers
- Breakbulk
- Liquid bulk
- Dry bulk

<table>
<thead>
<tr>
<th>Year</th>
<th>Containers</th>
<th>Breakbulk</th>
<th>Liquid bulk</th>
<th>Dry bulk</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>0.4</td>
<td>0.7</td>
<td>0.9</td>
<td>1.1</td>
</tr>
<tr>
<td>2004</td>
<td>1.9</td>
<td>2.2</td>
<td>2.2</td>
<td>1.7</td>
</tr>
<tr>
<td>2006</td>
<td>3.7</td>
<td>3.6</td>
<td>2.2</td>
<td>2.2</td>
</tr>
<tr>
<td>2008</td>
<td>4.3</td>
<td>6.3</td>
<td>8.3</td>
<td>11.2</td>
</tr>
<tr>
<td>2010</td>
<td>8.3</td>
<td>7.0</td>
<td>11.2</td>
<td>15.8</td>
</tr>
<tr>
<td>2012</td>
<td>6.3</td>
<td>7.0</td>
<td>11.2</td>
<td>15.8</td>
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<td>15.8</td>
<td>15.8</td>
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</tr>
</tbody>
</table>

## International experience

We have track record advising governments...

### Synopsis

<table>
<thead>
<tr>
<th>National Ports Logistics Plan</th>
<th>Jieyang Port Development</th>
<th>Ambon Market Positioning</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Advised the Brazilian government on development of 30 public ports in Brazil providing forecasts and policy recommendations</td>
<td>• Identified development options for a greenfield industrial port complex in Jieyang, Guangdong Province, China</td>
<td>• Identified market opportunities for the development of a new greenfield port in Ambon</td>
</tr>
<tr>
<td>• Brazilian Secretariat of Ports (Ministry of Transport)</td>
<td>• Provided recommendations on spatial requirements, clustering, and governance</td>
<td>• Drafted forecasts along with spatial and infrastructure requirements</td>
</tr>
<tr>
<td></td>
<td>• Jieyang Municipality</td>
<td>• Maluku Province</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Netherlands Embassy in Indonesia</td>
</tr>
</tbody>
</table>
### International experience
... and port authorities around the world

<table>
<thead>
<tr>
<th>#</th>
<th>Client(s)</th>
<th>Synopsis</th>
</tr>
</thead>
</table>
| 1 | Kuala Tanjung      | - Conducted market assessments to identify most promising segments  
                              - Drafted scenario forecasts and made recommendations on layout and infrastructure needs  
                              - Pelindo I                                                                                                                                  |
| 2 | Buenos Aires       | - Reviewed Buenos Aires’ development plans providing a 2nd opinion on those plans  
                              - Drafted a forecast model with scenarios for the port  
                              - Agencia General de Puertos                                                                                                               |
| 3 | Riga               | - Drafted scenarios with corresponding cargo and financial forecasts as input for the 2019-2028 Port Development Programme  
                              - Identified focus segments and provided recommendations  
                              - Freeport Riga Authority                                                                                                                  |
## International experience

We also provide capacity building programmes

<table>
<thead>
<tr>
<th>No.</th>
<th>Country</th>
<th>City</th>
<th>Main Topics</th>
<th>Objective(s)</th>
<th>Duration</th>
<th>Target group</th>
</tr>
</thead>
</table>
| 1   | Indonesia   | Medan      | • Port vision and planning  
• Port governance  
• Business development  
• Sustainability | • Provide international perspective on port development  
• Apply POR’s expertise to Kuala Tanjung development  
• Capacity building (staff training) | 8 days   | • Port professionals           |
| 2   | Brazil      | Pecém      | • Market positioning  
• Spatial planning  
• Stakeholder management  
• Port vision | • Develop a draft long-term vision statement for Pecém Port and industrial complex  
• Capacity building (staff training)  
• Stakeholder alignment | 5 days   | • Port professionals           |
| 3   | México      | Villahermosa | • Port vision and planning  
• Offshore supply base development  
• Greenfield port development | • Share lessons learned from POR’s development experiences  
• Apply lessons to Frontera port development | 3 days   | • Government officials/ port professionals |
International experience
We have also developed IT solutions for ports

1. Port Support Solutions
2. Global Logistic Solutions
International experience
We believe digitisation will be crucial to the success of ports

30% of shipments are delayed

44% of executives describe supply chain visibility as top priority

28 parties involved per transaction

25% of trucks on the road are empty