Ensuring hinterland access; the role of port authorities

Dr. Peter W. de Langen, Erasmus University Rotterdam & Port of Rotterdam Authority
Context: Port authorities are increasingly autonomous and commercial….

- **1998**: Antwerp
- **2001**: Hamburg
- **2005**: Canada
- **1999**: New Zealand
- **2005**: Western Australia
- **1991**: Rotterdam
- **UK**:

  - **PA as public department with public goals and direct public influence**
  - **PA as public entity with substantial autonomy and public goals**
  - **Commercialised PA, indirect public influence Mainly through shareholding. Public and commercial goals**
  - **Privately owned PA, no direct or indirect public involvement**
In an increasingly international market....

Global terminal operators’ percentage share of world container throughput
(Percentages)

<table>
<thead>
<tr>
<th>Global terminal operators</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPH</td>
<td>13</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>PSA International</td>
<td>9</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>APMT Terminals</td>
<td>9</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>DP World (^a)</td>
<td>9</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Cosco Pacific</td>
<td>6</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Eurogate</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>SSA Marine</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Total share of world throughput</td>
<td>53</td>
<td>56</td>
<td>57</td>
</tr>
<tr>
<td>World throughput (in millions of TEUs)</td>
<td>356.6</td>
<td>387.7</td>
<td>440.0</td>
</tr>
</tbody>
</table>

Europe–Far East trade: percentage slot capacity share by line/ groupings as (Percentage share)

<table>
<thead>
<tr>
<th>Operator</th>
<th>Mid-2005</th>
<th>Mid-2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maersk Sealand</td>
<td>12.5</td>
<td>21.4</td>
</tr>
<tr>
<td>Grand Alliance</td>
<td>22.2</td>
<td>14.5</td>
</tr>
<tr>
<td>New World Alliance</td>
<td>10.7</td>
<td>12.9</td>
</tr>
<tr>
<td>K Line and Yang Ming</td>
<td>6.8</td>
<td>5.8</td>
</tr>
<tr>
<td>CMA CGM/Norasia and others</td>
<td>9.7</td>
<td>5.7</td>
</tr>
<tr>
<td>CSAV NORASIA</td>
<td>1.2</td>
<td>2.2</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Total freight forwarding market: market share

Source: Datamonitor.

GLOBAL: Mining Firms Bulk Up, Echoing Big Oil Mergers

by Patrick Barta and Robert Guy Matthews, Wall Street Journal December 18th, 2007

For years now, mining companies have gotten rich supplying the raw materials that have fueled consumer booms from China and India to Brazil. As commodities prices soared, these companies socked away cash and snapped up rivals. Now they are embarking on another round of deals that promises a new class of juggernauts. The resulting megamers would have great influence over the cost of raw materials like iron ore, copper and uranium — and, by extension, the price of consumer electronics, cars and new apartment blocks.

Source: Adapted by the UNCTAD secretariat from information obtained by Dynamar B.V.

\(^a\) DP World includes CSX World Terminals and P&O Ports for all three years.
In general hinterland costs are a large part of door-to-door costs

Capacity bottlenecks and congestion

Opportunities to improve chain efficiency through better coordination

And a need for action given expected growth
...and interorganisational issues are center stage.
What is the role of the PA in this environment?

Core activities

Traffic management
- Effective, safe & efficient vessel management
- Partnerships for traffic management on road and rail

Area management
- Provide space (to new companies) for growth
- Intensify land use
- Develop the required infrastructure
- Improve environmental quality port area

Customer management
- Attract new customers
- Create customer satisfaction
- Provide value added for customers as ‘business partner’

Stakeholder management
- Invest in partnership in an attractive location climate
- Influence relevant regulation
- Invest in license to operate
Possible roles for PAs

Possible role of PA

- Invest in rail & barge terminals in port & hinterland
- Infrastructure access rules for rail and road
- Invest in Port Community System
- Conditions in concession contracts
- Enable competition & reduce entry barriers

Components of port hinterland access

- Quality of hinterland infrastructure
- Efficient utilisation of hinterland infrastructure
- Well coordinated transport chain
- Sustainability of hinterland Transport system
- Price & quality of Services in all parts of supply chain
Sufficient capacity of infrastructure is required. Expansion required given volume growth.
Utilisation of infrastructure is at least equally important
Efficient utilisation does not emerge ‘spontaneously’
Clear opportunities, both in terms of traffic management and in terms of mobility management
Coordination between various firms in door to door chain is required. This coordination does not arise spontaneously. 
- Free rider 
- Disbalance of costs and benefits 
- Short term focus/lack of resources 
- No supply chain orientation 

More coordination has substantial benefits
Sustainability of transport chain becomes important for license to operate
Sustainability does not emerge ‘spontaneously’
Especially relevant giving growing volumes
Competitive price & quality levels in all parts of chain are required
Market dominance may reduce price and quality levels
Securing competition will contribute to price & quality of services
Competition may not always be attractive from profit maximisation perspective of PA
PAs can put efforts to reduce entry barriers
  Regulatory entry barriers (e.g. rail market)
  Lack of suitable locations
  Investments in fixed assets
Competition may be problematic due to large MES in relation to market size. In this case competition for the market may be the second best
Setting conditions in concession contracts can contribute to sustainability, coordination in transport chains, and efficient use of infrastructure.

- Modal split guarantees
- Use of Port Community System
- Service level agreements
- Opening hours/peak shaving
Port community system is crucial to ensure data exchange in port
Connections with customs & inspections
Investments in PCS are a collective action problem
Role for PA to jointly invest in PCS
Infrastructure access rules can improve utilisation, coordination in transport chains and sustainability

- Only allow clean trucks
- Allocate slots (e.g. rail)
- Link infrastructure access to terminal handling slots

PA not by definition in well positioned to develop infra access rules, but may play a role.
PA has planning initiative in port
Forward looking planning & investments required
Beyond traditional port area, ports may invest in terminal capacity as well.
Who takes the planning initiative for inland terminals? For terminals with captive cargo, either large shippers or regional agencies. For ‘transferium’ type inland terminals situation is less clear. Pas may need to play a role here.