MAJOR CHANGES IN GLOBAL SHIPPING, MEETING THE DEMAND, IMPLICATIONS FOR PORT OPERATORS

Bernard MAZUEL, Délégué Général
UNION DES PORTS DE FRANCE

Papeete, October 19th, 2015
UNION DES PORTS DE FRANCE - FRENCH PORTS ASSOCIATION

is the trade association representing the French port operators

44 MEMBERS
Most French commerce and fishing sea ports in continental France and overseas departments and territories, irrespective of their legal status (State port, Chamber of Commerce,..). It also includes two major inland ports, Paris and Strasbourg.

32 ASSOCIATED MEMBERS
Maritime Trade associations: Shippers, Freight Forwarders & Logisticians, Shipping Agents, Ship-owners, etc..

3 MAIN MISSIONS
- to represent French ports in labour negotiations with the unions, in close cooperation with the French Cargo Handling Association (UNIM).
- to uphold the interests of French ports towards the French government, the European authorities and the media. UPF is a member of ESPO, the European Sea Ports Organisation.
- to operate networks for good practice sharing, and exchanging experiences in the various activities involved in port operation.
The increased demand in global goods exchanges has supported the development of maritime transportation, especially since the 90’s and moreover since China joined the WTO in 2001.

More than 90% of all goods being transported by sea, the total seaborne capacity has more than doubled since 1990, especially in the bulk- and container-carriers segments.
Figure 1.2. International seaborne trade, selected years (Millions of tons loaded)

Source: UNCTAD Review of Maritime Transport, various issues. For 2006–2013, the breakdown by type of cargo is based on Clarkson Research Services, Shipping Review and Outlook, various issues.
ALL WORLD-WIDE TRADE ROUTES ARE CONCERNED

Figure 6.1. Interregional container flows, 2011 (Thousands of TEUs)

Source: UNCTAD secretariat, based on data provided by Lloyd’s List Containerisation International, various issues.
A fast-changing environment

• Such demand (and advanced technology) resulted in much larger ships being built:
  – New ships:
    • Increased length (400m), width (60m), draft (17m), air draft,
      (container-carriers, bulk carriers, cruise ships,..)
  – Induces Competitiveness:
    • a decreasing number of calls per rotation
      -> increased ports competition, feederings threat,..
    • A higher handling productivity, in order to reduce the time spent at port.
Container ships are the fastest and largest growing type of vessels.
Over a 6 years period, container ships have grown 100 m + in length
ULCCs size fits one trade route only, Asia-Europe. The subsequent « cascading » can induce over-dimensionning on the other routes
Cost-savings

• Not only do these ships enable ship-owners to meet the increased demand, they also enable a huge decrease in transportation costs, supposedly benefiting the end-user.
Cost-savings

- The purchase of high-capacity vessels generates reduced costs per slot: from 14,000 US$ / slot for a 3,600 teu to 7,000 US$ on a 19,000 teu vessel)

- On the operations side, a 2.5 x capacity increase generates over 30% decrease in slot operational costs.

Figure 2.2. Estimated annual operation cost per nominal TEU – assuming 85 % utilization

Source: Own elaborations, based on Drewry Maritime Research and own estimates.
ULCCs Impact

• Those vessels became even more competitive since the 2008 crisis, when slow-steaming was implemented. To such an extend that the shipping lines who do not have such large vessels cannot compete anymore with those who have them.

• They must either order similar vessels to keep pace, or withdraw from the main routes.

• Very few having made the second decision, the global order-book and available capacity on the seas have never been so high.
A fast-changing environment

• As a result of larger ships being introduced, the traditional maritimes routes have had to adapt in order to cope with demand.

• Hence the following changes:
  • Suez Canal extension (8B$, June ‘15)
  • Panama Canal enlargement (9 years, due April ‘16)
  • Nicaragua Canal implementation (2020?)
  • Asia-Europe North route?
  • North Atlantic route?

Etc..
NEW ROUTES

SUEZ CANAL

The first ships have crossed the new Suez Canal on July 25th, 2015, on a test prior to its official inauguration on August 6th. The works involved lasted one year and required an investment of about 8 billion US.

Source: Le Monde
NEW ROUTES

PANAMA CANAL

The enlarged Panama canal is due to be in operations in April 2016, after 9 years of works.

ARNULFO FRANCO/AP
Mise en eau de la nouvelle section du canal de Panama, le 22 juin 2015
Daniel Ortega, president of Nicaragua, and Wang Jing, Chairman of HKND, on June 14th, 2013, in Managua, signing the contract for the construction of "Nicaragua Grand Inter-Oceanic Canal". (Source photo: hknd-group.com)
How do ports address this change in paradigm?

a) On the quay-side:
Mostly by investing in new infrastructures and equipment:
- Container terminals: quay length, draft, new cranes (more cranes, more powerful), stacking surface increases,..
- Cruise sector: cruise terminals, commercial zones,..
- Deeper dredging, larger tugs,
- Larger ship repair facilities,..
Le défi du gigantisme

- Méga navires = méga grues
- Longueur & profondeur du quai
- Tirant d’air *
- Portée (23) *
- Capacité intermodale
- Agilité opérationnelle

Inventaire en
Super post-Panamax gantries

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2014</th>
<th>2020</th>
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<tr>
<td></td>
<td>20</td>
<td>1,160</td>
<td>&gt;2,000</td>
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*Note: Figures for 2020 are estimated.
New cranes, digging, reinforcing quay-sides, dredging, stacking,..
But Ship-owners and ports have different time scales

- Port infrastructure conception and subsequent realization require 5 times more time than for a vessel.
- A port infrastructure life-time is more than 5 times that of a ship.
SERVICE TO VESSELS

PORT SERVICES HAVE INVESTED IN NEW EQUIPMENTS ADAPTED TO NEW SHIPS’ DIMENSIONS

Tugs engine power has been multiplied $X 4$
Consequences for marine infrastructures and ports:

- Accelerated infrastructures obsolescence
- Accelerated equipments obsolescence
- Investissements not always compensated by a significant traffic increase (larger ships, same volume)
- Less calls but a higher unit handling volume => a more erratic labour organisation along the week
- High volumes per call => jammed land accesses
Intensité de l’escale

ECT: 10,557 containers sur le Thalassa Pistis 28/10/2014

16 feeders  50 barges  2,500 trucks  30 trains
Numerous non-port infrastructures are also impacted world-wide:

In New York city, 1.3 billion USD spent elevating the Bayonne Bridge, previously limiting to 8,000 teu the maximum container-vessels size (air draft issue).
How do ports address this change in paradigm?

• b) other port moves:
  – Increasing the hinterland, improving land accesses,
  – Administrative facilitation : One-stop Shopping, CCS implementation,..
  – Environment : developing alternative modes’ (river and rail transportation) market shares, LNG bunkering, cold-ironing, ESI trophies,..
The challenges going forward:

The example of the Panama canal
Dimensions of Locks and Vessels

Existing Locks Max Vessel: 4,400 TEU's

Current Locks:
- Length 366 m (1,200')
- Beam 49 m (160')
- 12.8 m (42')

New Locks Max Vessel Size: 13,000 – 14,000 TEU's

New Locks:
- Length 427 m (1,400')
- Beam 15.2 m (50')

Panamax

12.04 m (39.5')

18.3 m (60')
Neopanamax Vessels for New Markets at the Expanded Canal

- **Container Vessels**
  - 13,000 to 14,000 TEU
  - New volumes from:
    - Latin America
    - Market Recovery from:
      - West Coast United States
      - Suez Canal

- **Dry Bulk**
  - Up to 170,000 DWT
  - Coal from Colombia
  - Metalurgical coal from Vancouver
  - Iron Ore from Brazil in Minicapesize (85,000-120,000 DWT)

- **Liquid Bulk**
  - Up to 150,000 DWT
  - Tankers
  - Petroleum Products

- **LNG/LPG**
  - LNG Up to 177,000m³ and VLGC
Expansion Program Components

Atlantic Ocean

Atlantic Post Panamax Locks

Increase the Maximum Operating Level of Gatún Lake

26.7 m → 27.1 m

Deepening & Widening of the Gatún Lake & Culebra Cut navigational channels

Post Panamax Pacific Locks Access Channel

48 Mm³

Deepwater Atlantic

15.8 Mm³

Pacific Post Panamax Locks

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The Panama Canal

- Gamechanger?
- Shifting International trade routes?
Questions - Concerns

• Which consequences for those harbours in the Pacific and Carraibean areas that cannot accommodate 13,000 teu ships?

• Will they become feederized ports? Is feederization a threat? Will it impact door-to-door transportation costs, and thus the cost of living, and delays?

• Or on the contrary may massified main leg absorb trans-shipment costs?
Questions - Concerns

• Up to which level should harbours invest in upgrading their facilities (not necessarily ULCCs) ? Investing is necessary, but not necessarily sufficient, as shipping lines do not commit themselves.

• Will there still be room for direct services with current ships size ?

• Local example: what should Tahiti do ?
« C’est aux ports de supporter les couts induits par les mega-ships »

APMT CEO says ports must bear costs of big ships

In an exclusive interview with CM, the CEO of APM Terminals Kim Feijer, has said that it is up to container terminals and port operators to deal with the problems caused by the growing size of ships and alliance agreements. When asked if shipping lines should be more considerate about the problems mega-ships and alliances can cause, he said these changes are “a natural evolution of ship design and business goals. Port operators need to keep pace with industry changes”.

Source: Drewry Maritime Research

8 à 10 million US$ la pièce
Thank you for your attention,

Time for discussion 😊