



THE RELATIONSHIP BETWEEN SEAPORTS AND THE INTERMODAL HINTERLAND IN LIGHT OF GLOBAL SUPPLY CHAINS: EUROPEAN CHALLENGES

Theo Notteboom

ITMMA - University of Antwerp
and
Antwerp Maritime Academy

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'Seaport Competition and Hinterland Connections'

Ports live in a turbulent world



Global supply chains, port selection and hinterland connections

- The focus on standalone physical attributes of a port does not mirror the reality of (global) supply chains.
- European ports are increasingly competing not as individual places that handle ships but as crucial links within (global) supply chains
- A port's competitiveness becomes increasingly dependent on external co-ordination and control by outside actors.

- The immediate hinterland as the backbone for port rivalry in a gateway region
- Shifts in cost basis
- Gateway regions increasingly vie for distant contestable hinterlands
- The North-South balance in perspective
- Transshipment hubs under scrutiny and its impact on inland freight distribution
- The challenge of the periphery
- Port competition and the role of upstream ports

Shifts in cost basis ?

- Time costs of the goods
- Inventory costs linked to the holding of safety stocks
- Indirect logistics costs linked to the aggregated quality within the transport chain and the
- These three cost categories have gained in significance:
 - more high value products (time costs)
 - reliability and capacity considerations next to pure cost considerations (increasing time buffers?)
 - flexible network design offering various routing alternatives ('not all eggs in one basket')

- Gateway port
- Transshipment/interlining port (transshipment incidence >75%)
- Gateway port also handling substantial transshipment flows

□ Logistics core region

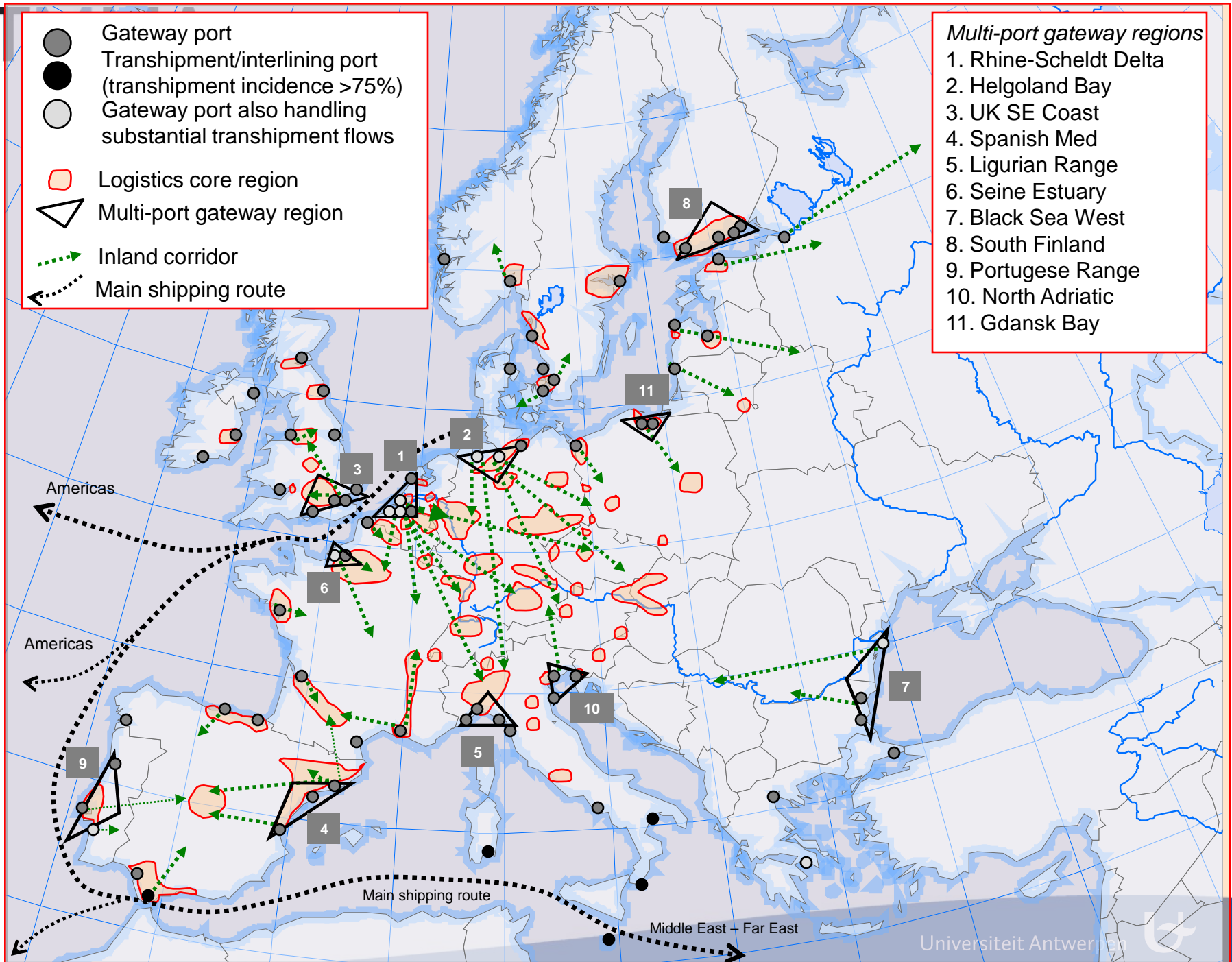
△ Multi-port gateway region

→ Inland corridor

→ Main shipping route

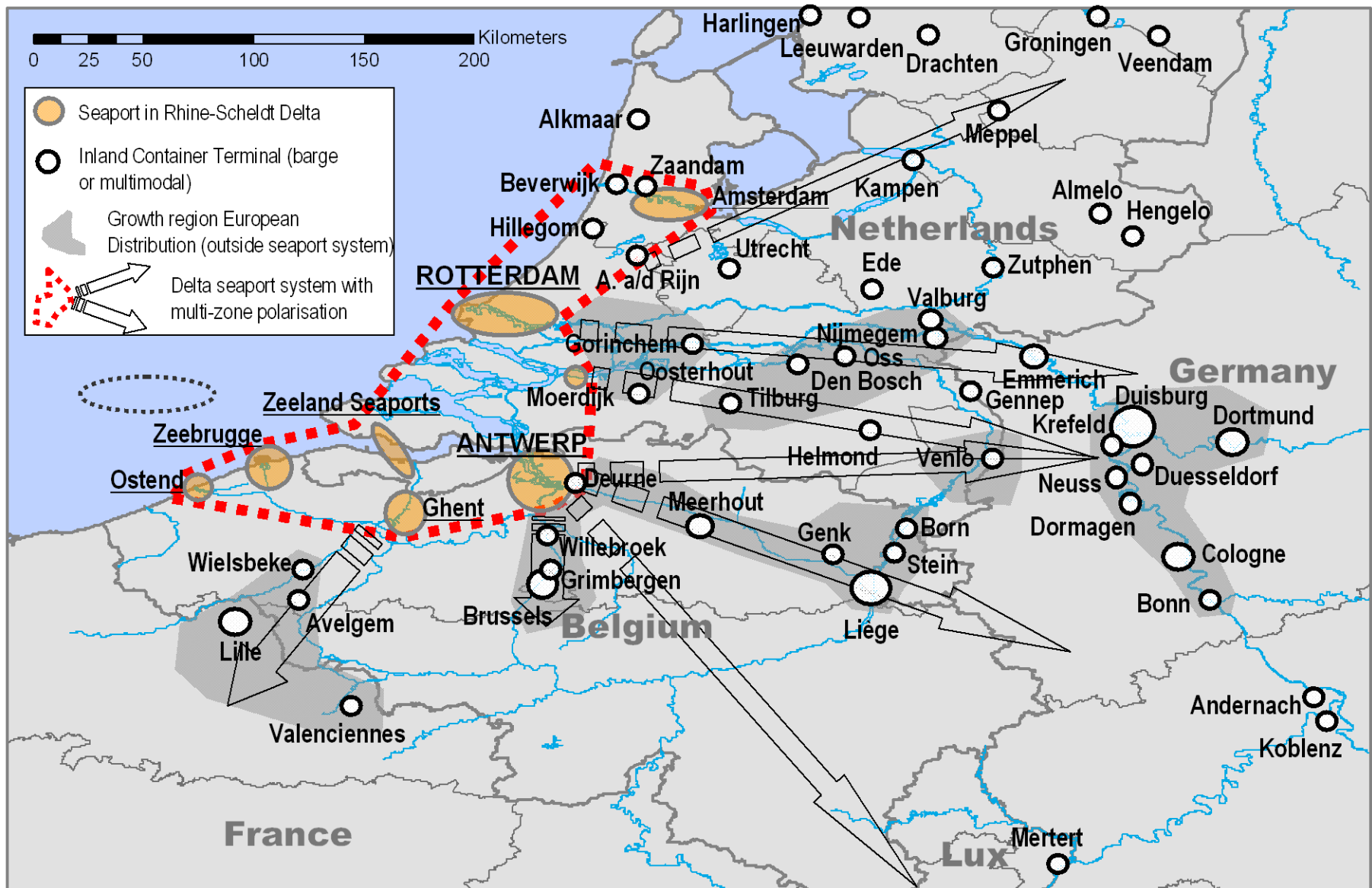
Multi-port gateway regions

1. Rhine-Scheldt Delta
2. Helgoland Bay
3. UK SE Coast
4. Spanish Med
5. Ligurian Range
6. Seine Estuary
7. Black Sea West
8. South Finland
9. Portugese Range
10. North Adriatic
11. Gdansk Bay



Port competition is changing

Port regionalization is unfolding



Iso-distance zone – 500 km

Hamburg-Le Havre range 2005 (1996)

% of population EU27= 32% (32%)

% of GDP EU27= 40% (46%)

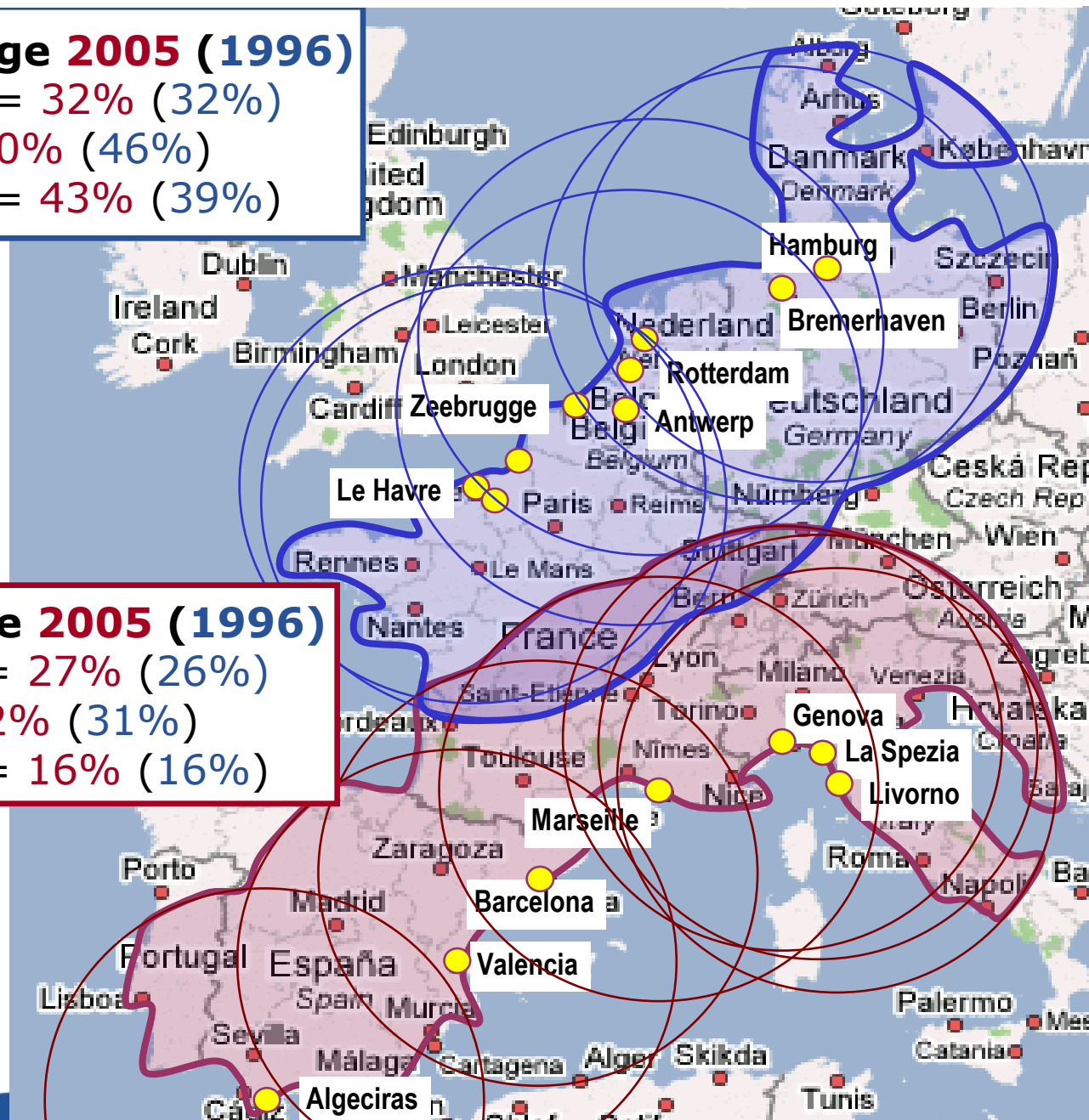
% of TEU traffic EU27= 43% (39%)

Algeciras-Livorno range 2005 (1996)

% of population EU27= 27% (26%)

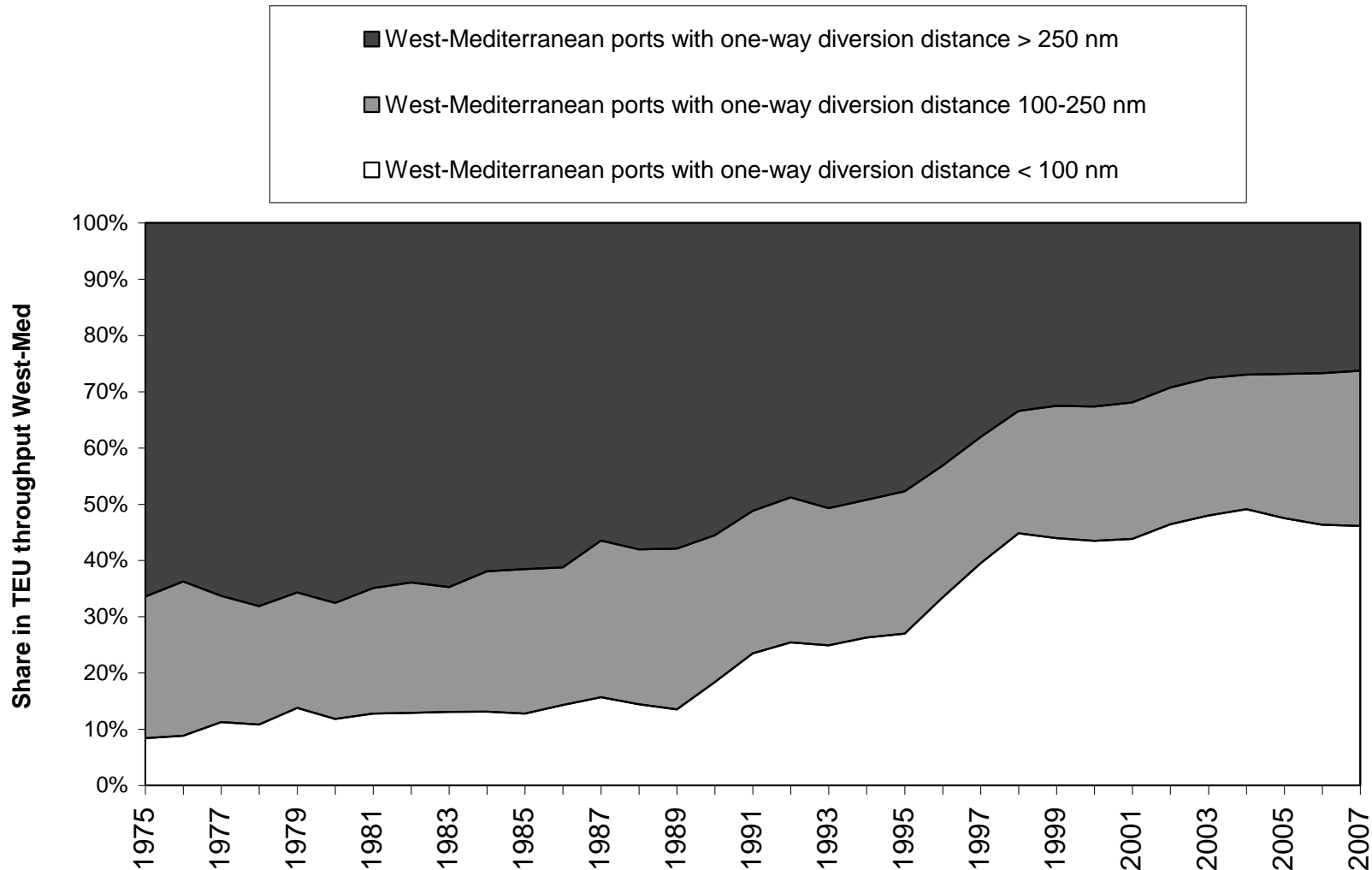
% of GDP EU27= 32% (31%)

% of TEU traffic EU27= 16% (16%)



Transshipment hubs under scrutiny and its impact on inland freight distribution

The market shares of ports in the West Mediterranean. Ports grouped according to the diversion distance from the main shipping route (1975-2007)



The challenge of the periphery

Evolution of the share of the market leader in the multi-port gateway region (in %)

	1985	1995	2007	Trend for market share of leader	Main challengers in the periphery
RS Delta	62.6	61.8	50.3	Decreasing, leader unchanged (Rotterdam)	Zeebrugge (+), Amsterdam (-), Flushing (?)
Helgoland Bay	54.0	65.2	66.8	Increasing, leader unchanged (Hamburg)	Wilhelmshaven (°), Cuxhaven (x)
UK SE Coast	48.1	54.3	47.3	Fluctuation, leader unchanged (Felixstowe)	London Gateway (°), Bathside Bay-Harwich (°) Dibden Bay (X), Teesport (?)
Spanish Med	52.2	49.3	53.4	Fluctuation, change in leader (Valencia overtook Barc.)	-
Ligurian Range	48.2	30.0	45.6	Fluctuation, change in leader (Genoa overtook Leghorn)	-
Seine Estuary	80.8	89.0	94.3	Increasing, leader unchanged (Le Havre)	-
Black Sea West	n.a.	n.a.	90.4	Increasing, leader unchanged (Constanza)	-
South Finland	n.a.	60.3	40.9	Decreasing, change in leader (Kotka overtook Helsinki)	Kotka (+)
Portugese Range	57.9	58.4	48.7	Recent decrease, leader unchanged (Lisbon)	Sines (+)
North Adriatic	50.5	41.3	41.3	Fluctation, change in leader (Venice overtook Ravenna)	Trieste (+)
Gdansk Bay	100.0	99.6	86.4	Decreasing, leader unchanged (Gdynia)	-

(+) (some) terminal(s) already in operation; strong results

(-) (some) terminal(s) already in operation; moderate results

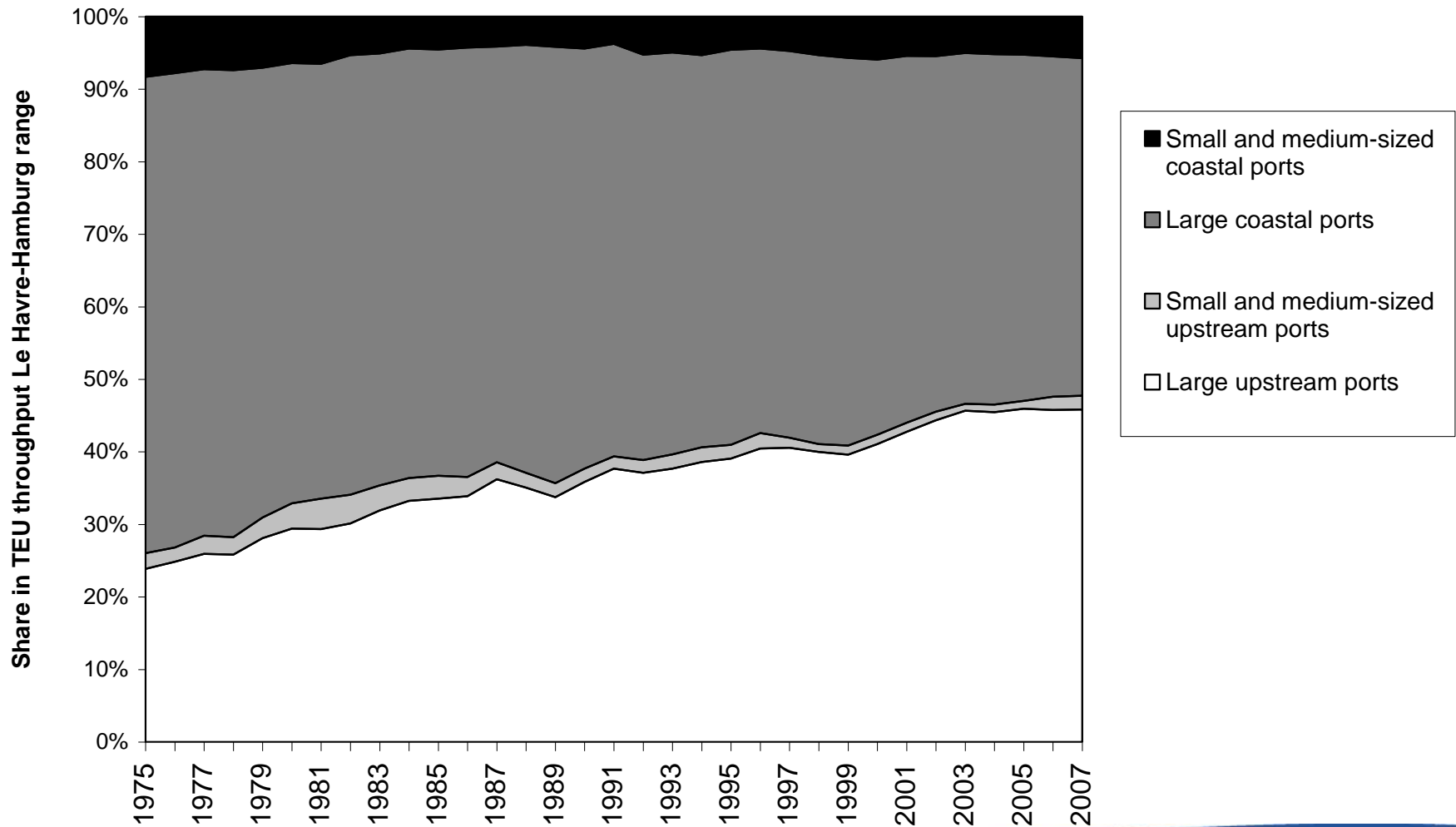
(°) Terminal under construction

(?) No container terminal yet, planning phase

(x) Container terminal was planned, but plans abandoned or rejected

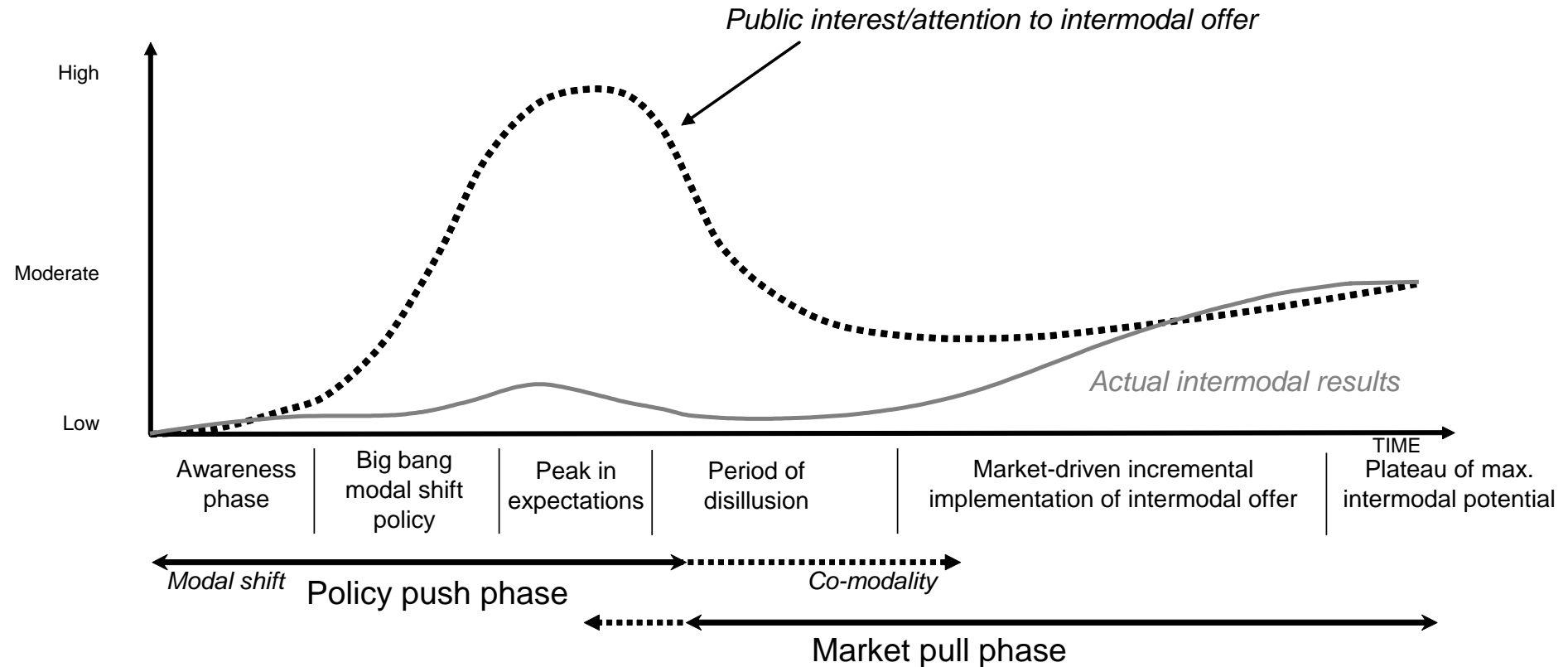
Port competition and the role of upstream ports

Evolution of the market shares in the Le Havre-Hamburg range



THE ROLE OF RELEVANT ACTORS IN THE STRUCTURING OF HINTERLAND NETWORKS

Policy push and market pull in achieving a modal shift and co-modality

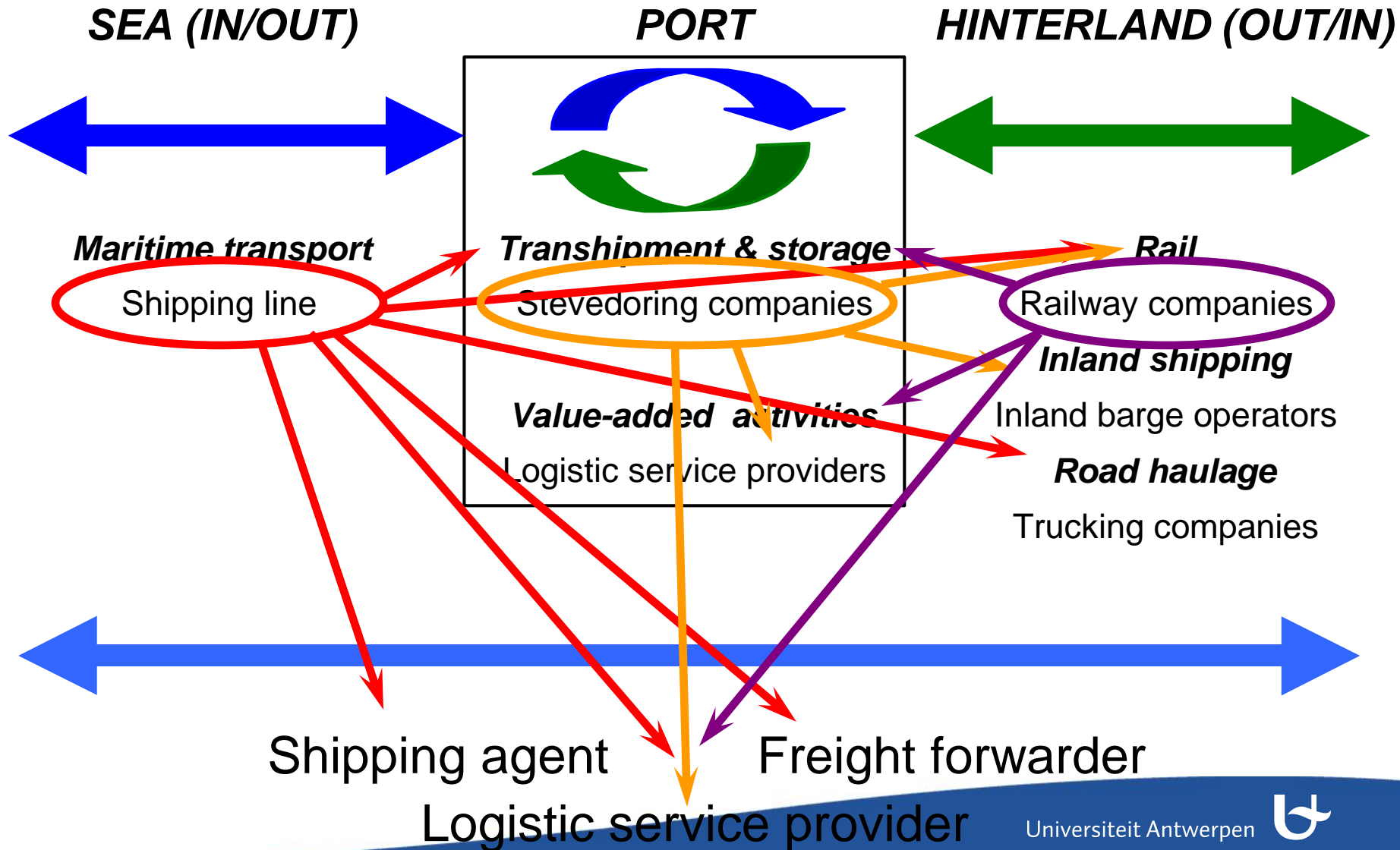


Co-operation, logistics integration and market pull in the intermodal offer

- Coordination and cooperation is needed to form an integrated intermodal service that complies with the requirements imposed by the supply chains that pass through the port
- Van Der Horst and De Langen (2008): categories of arrangements to improve coordination:
 - the introduction of incentives (e.g. a bonus or penalty),
 - the creation of an inter-firm alliance (e.g. through the introduction of standards for quality and service or a joint capacity pool)
 - changing the scope of the organization (e.g. through vertical integration or the introduction of a chain manager)
 - collective action (e.g. through the governance by a port authority or a concerted action by a branch association)

The logistics environment is changing

Logistics integration is unfolding





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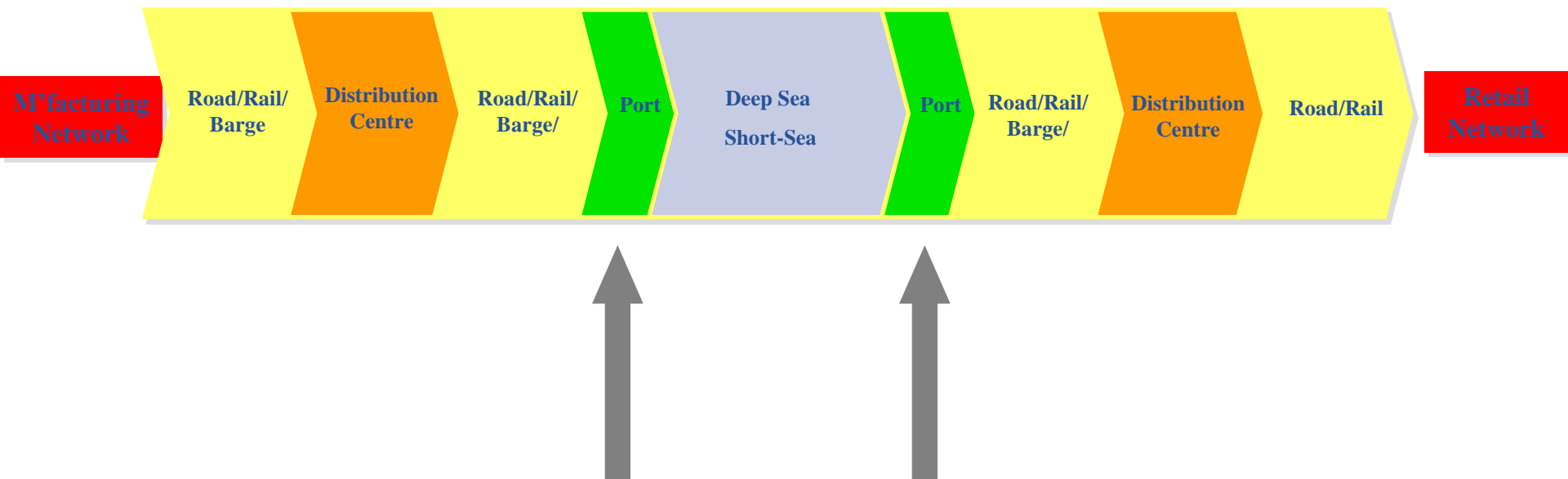
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Market players

- Paper discusses involvement of market players in inland transportation
 - Shipping lines
 - Terminal operators
 - Rail operators
 - Barge operators
 - Etc...
- Functional integration is partly result of customer demand, not only a result of the search for revenue, cost control or efficient use of capacity=> **relation integration-competition ?**



Seaports need to reach into the chain in both directions
'Anchor' logistics actors with decision power
Enhance integration of the port in broader networks

New role for port authorities

Seaports as active logistics nodes: how ?

- (Landlord) port authorities should broaden their role as facilitator
 - ⇒ Larger autonomy of port management, more flexibility and possibilities to take participations with other companies (link with port governance)
 - ⇒ The port authority can be a catalyst even when its direct impact on cargo flows is limited.

- Competitive battle among ports will increasingly be fought ashore.
- Quite a number of actors try to play the first violin in this battle
 - ⇒ Relation integration, coordination and competition ?
 - ⇒ Port investments should not be treated in isolation
- Success of a port strongly affected by the ability of the port community to fully exploit synergies with other transport nodes and other players within the logistics networks of which they are part.

- Port authorities can be catalysts in improving the port-hinterland interface and the structuring of hinterland networks, even though their direct impact on the routing of cargo flows is limited.
- Terminals, both in seaport as well as in inland ports, are expected to increase their role in supply chains, given increasing levels of vertical integration in the market and an increasing pressure on capacity (scarcity).
 - =>Pricing tools + push operational considerations
 - =>High interest from market players and investors



Thank you for your attention !

theo.notteboom@ua.ac.be

