



**OCEAN
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CONSULTANTS**

a company of



Global perspectives in the regional trade

Kuwait, 29th January 2019

16th Trans Middle East 2019

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Introduction

Current:

**OCEAN
SHIPPING
CONSULTANTS**

a company of



**Royal
HaskoningDHV**
Enhancing Society Together

Past:

Drewry 

ARUP

 **V.Group**

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Enhancing Society Together

Introduction

Ocean Shipping Consultants (OSC) is the maritime economic consultancy group of Royal HaskoningDHV, and a leading brand in the maritime sector with more than 35-years of experience

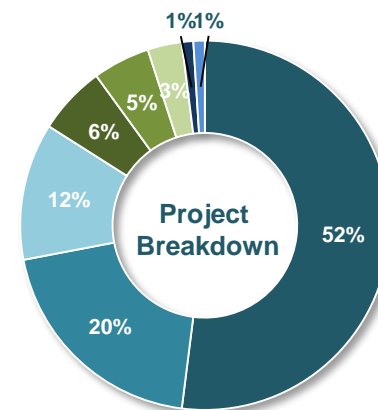
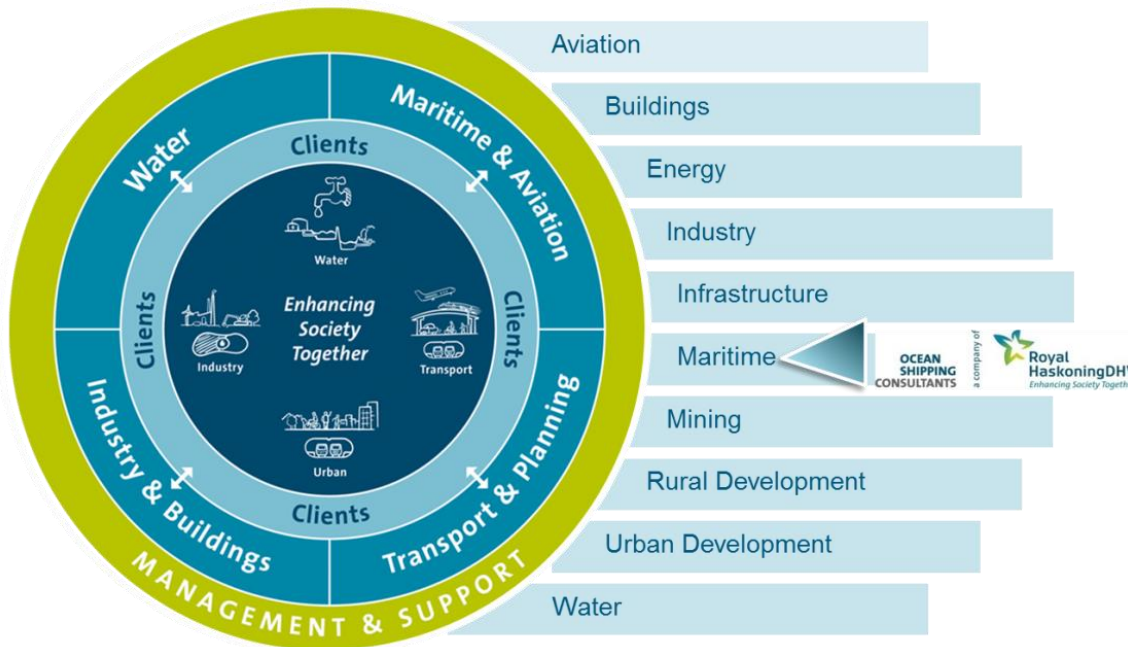
Key profile	Top International Design Firm	Resources
<ul style="list-style-type: none"> - Originally founded in 1881 - 138 years of experience - Turnover €607m (2017) 	<p>Ranked 4th in Top International Design Firms – Marine & Ports by ENR (2018)</p>	<ul style="list-style-type: none"> - 5,700 employees - 100 offices in 35 countries - 650 dedicated ports and maritime professionals

OCEAN SHIPPING CONSULTANTS

With over 350 projects in more than 65 countries successfully completed over the last 5 years, OSC provides global bespoke consultancy services from offices in London, the Netherlands and

Singapore to more than 200 different clients, including port authorities, terminal operating companies, governments, shipping lines, logistics operators and the wider financial community.

These range of services are undertaken for all cargo types and sectors ensuring that clients are able to make appropriate, well informed decisions at all times.



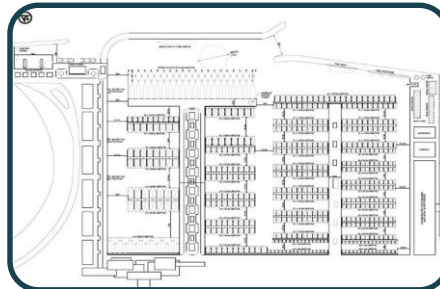
- Market Study
- Due Diligence
- Feasibility Study
- Strategy
- Investment Services
- Publication
- Logistic Study
- Benchmark / Operations

Examples of recent projects in Kuwait



Al Zour Refinery, 2015

Royal HaskoningDHV was employed by Van Oord to review the geotechnical compliance procedures being used on a land reclamation project in Kuwait and to compare pre and post tender ground conditions at the site. We were able to confirm Van Oord's method of demonstrating that soil compaction met the requirements of the Specification. We also compared the pre and post Tender GI information and presented the information as a series of drawings.



Salmiya Marina Redevelopment, 2015-16

Royal HaskoningDHV was engaged by Gensler Architects to provide Concept Design of the marine elements for the proposed Salmiya Marina, Kuwait. The Concept Design provided an expanded marina that would help alleviate the future demand for boating facilities in Kuwait. The concept design was progressed sufficiently for the preparation of 3D graphics and preparation of a Concept Design book prepared by Gensler.



Mubarak al Kabeer Seaport Development, 2010-12

The Employer, the Ministry of Public Works in Kuwait, planned to construct a deep water port to the east of Boubyan Island. The port would be constructed in four phases over the next 20-30 years. Royal HaskoningDHV was engaged by the joint venture Contractor, HDEC-MAK. Royal HaskoningDHV provided engineering and environmental consultancy services to Hyundai for the detailed design of the Boubyan Sea Port Project, Phases 1 and 2. The contract involved the design construction Phase 1, of 1.7 km of quay, a small boat harbour and the reclamation of a 2 km² terminal area for future development.



Kuwait Coastal Havens Nikas, 2009-15

The Ministry of Planning and KPA defined a Study to develop and implement a total of nine coastal ports "Nikas". The locations of the coastal ports comprised the entire coast of Kuwait. Our approach to the project was to provide KPA with the necessary studies, designs and tender documents to meet the defined objectives in 2 Phases:

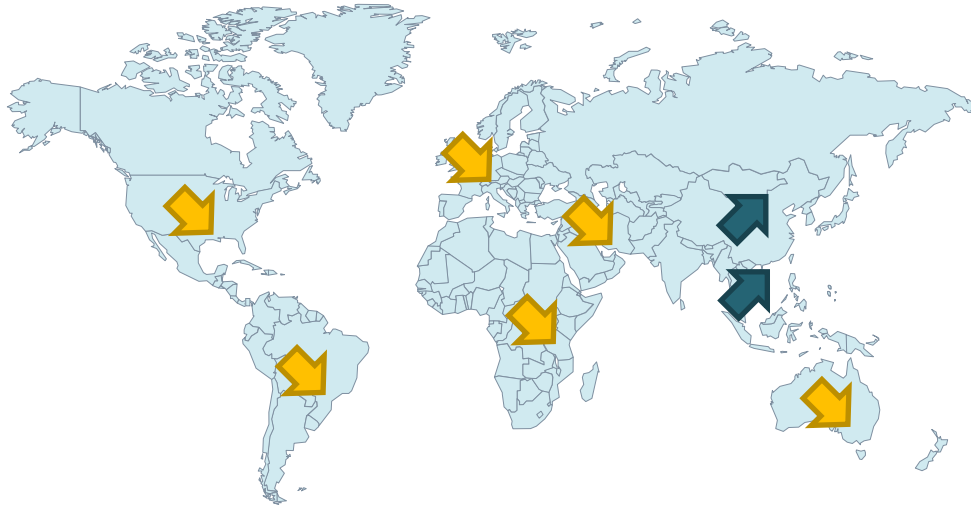
Phase 1 comprised of the development of a Coastal Ports Master Plan while Phase 2 included the development of plans and tender documents.



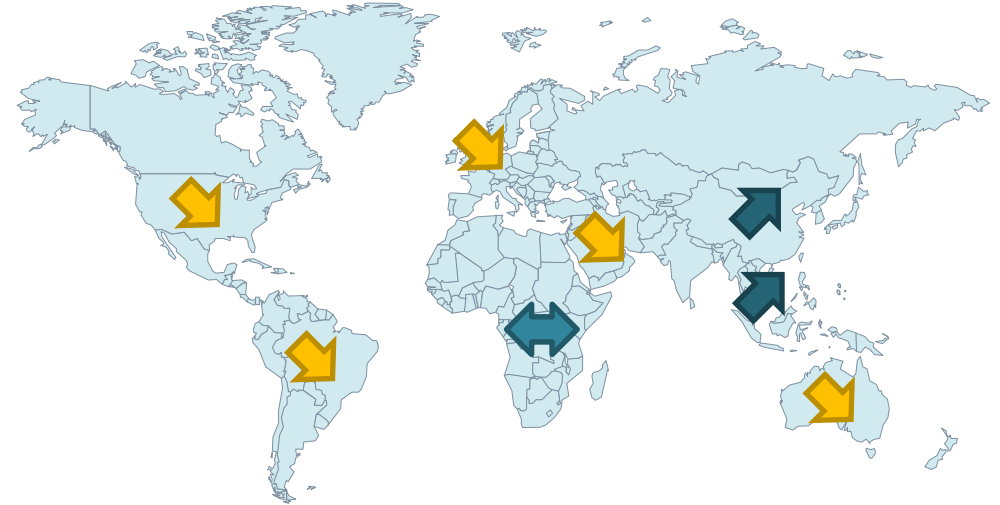
Global Economic Outlook & the Container Shipping Sector

SE Asia and China are expected to out perform other regional economies in the near future.

Current GDP Performance* by Region (2018)

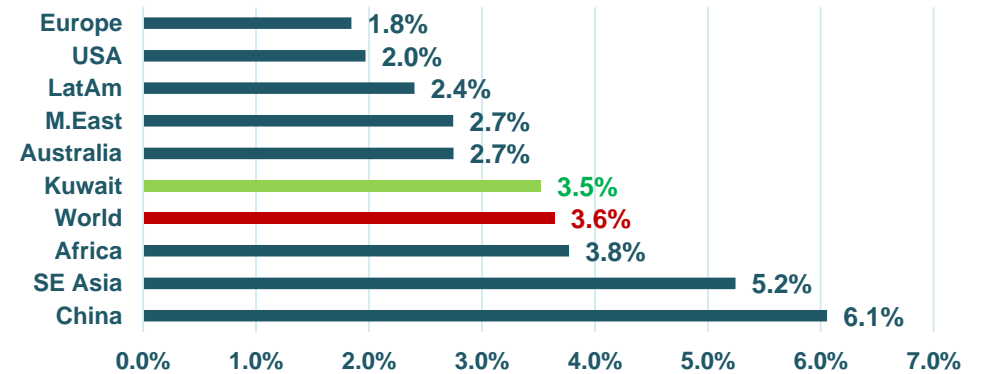


Future GDP Performance* Outlook by Region (2017-2023)



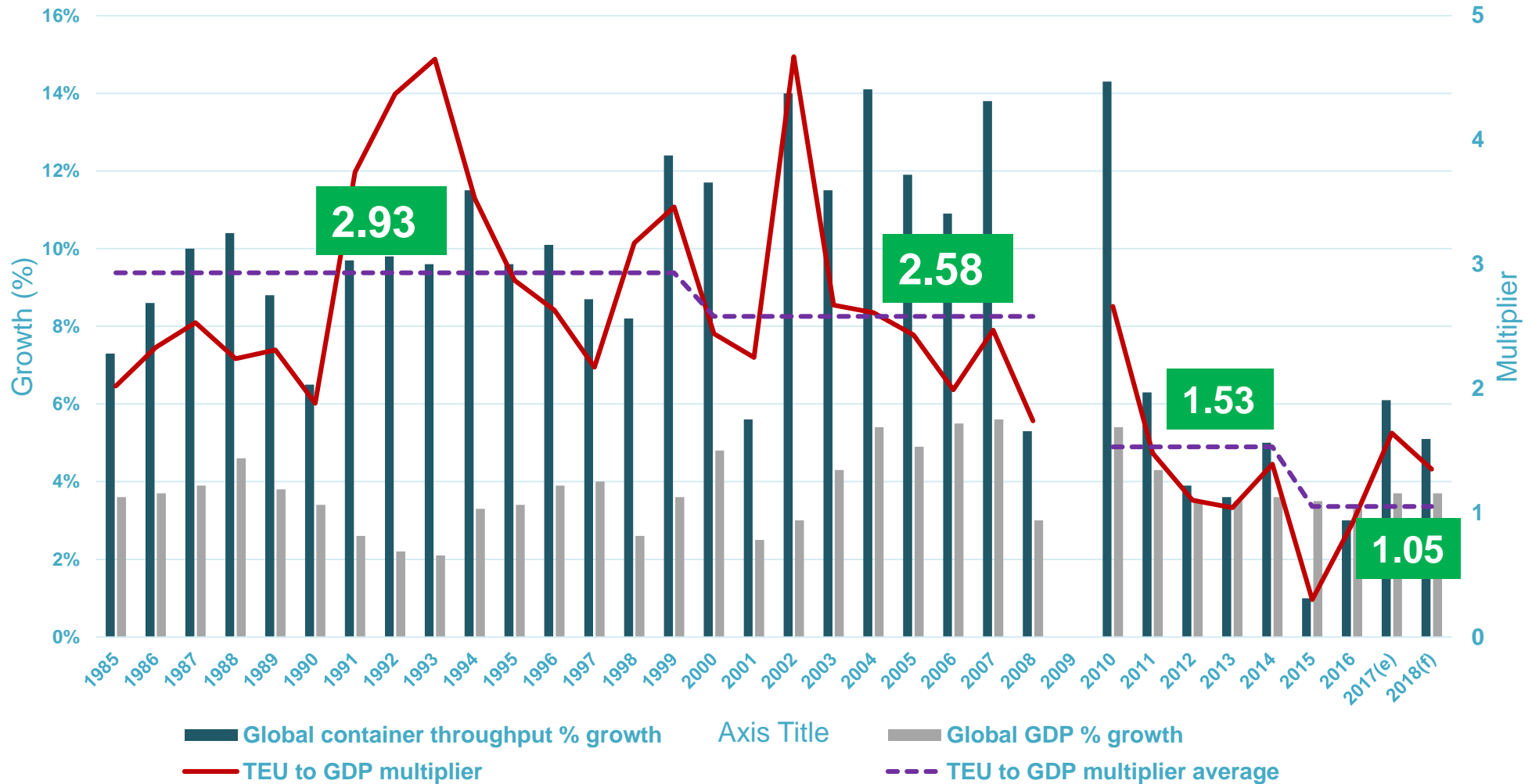
Source: OSC / IMF
 *Performance as compared to Average World GDP Growth

GDP forecast CAGR, 2017-2023 (%)



Source: OSC / IMF

The declines in the container volume growth is putting pressure on Shipping Lines and Terminal Operators and means lower TEU demand than in past years.



Source: OSC / Clarkson

The declining TEU/GDP multiplier is driven by underlying changes in the market.

Less offshoring, more reshoring:

- Offshoring to lower-cost countries is a onetime effect
- Increased reshoring (e.g. US)
- Chinese economy shifts toward domestic consumption / regional sourcing





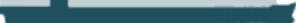
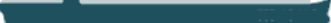
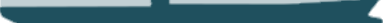

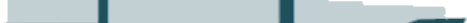
Plateauing in the levels of containerization:

- Most commodities suitable for containerized transportation have already been migrated to containers
- Increasing trend toward miniaturization of manufactured goods

Improvement of port facilities to accommodate larger ships:

- More ports can be part of direct main line services
- Cascading of vessels means larger ships deployed on secondary routes
- Reduced need for transshipment

Driven by market share & economies of scale, the ship size revolution has continued

Container Ship Size Evolution		
Early Containerships (1956) 500-800 TEU		LOA (m) : 137 Beam (m): 17 Draft (m): 9
Fully Cellular (1970) 1000-2500 TEU		LOA (m) : 215 Beam (m): 20 Draft (m): 10
Panamax (1980) 3,000-4,000 TEU		LOA (m) : 250 Beam (m): 32 Draft (m): 12.5
Panamax Max (1985) 3,400-4,500 TEU		LOA (m) : 290 Beam (m): 32 Draft (m): 12.5
Post Panamax (1988) 4,000-5,000 TEU		LOA (m) : 285 Beam (m): 40 Draft (m): 13
Post Panamax Plus (2000) 6,000-8,000TEU		LOA (m) : 300 Beam (m): 43 Draft (m): 14.5
New Panamax (2014) 12,500 TEU		LOA (m) : 366 Beam (m): 49 Draft (m): 15.2
Post New Panamax (2006) 15,000 TEU & Triple E Class (2013) 18,000 TEU		LOA (m) : 400 Beam (m): 59 Draft (m): 15.5
New Generation 22,000 TEU*		LOA (m) : 430 Beam (m): 59 Draft (m): 15.5

Source: OSC, Alphaliner

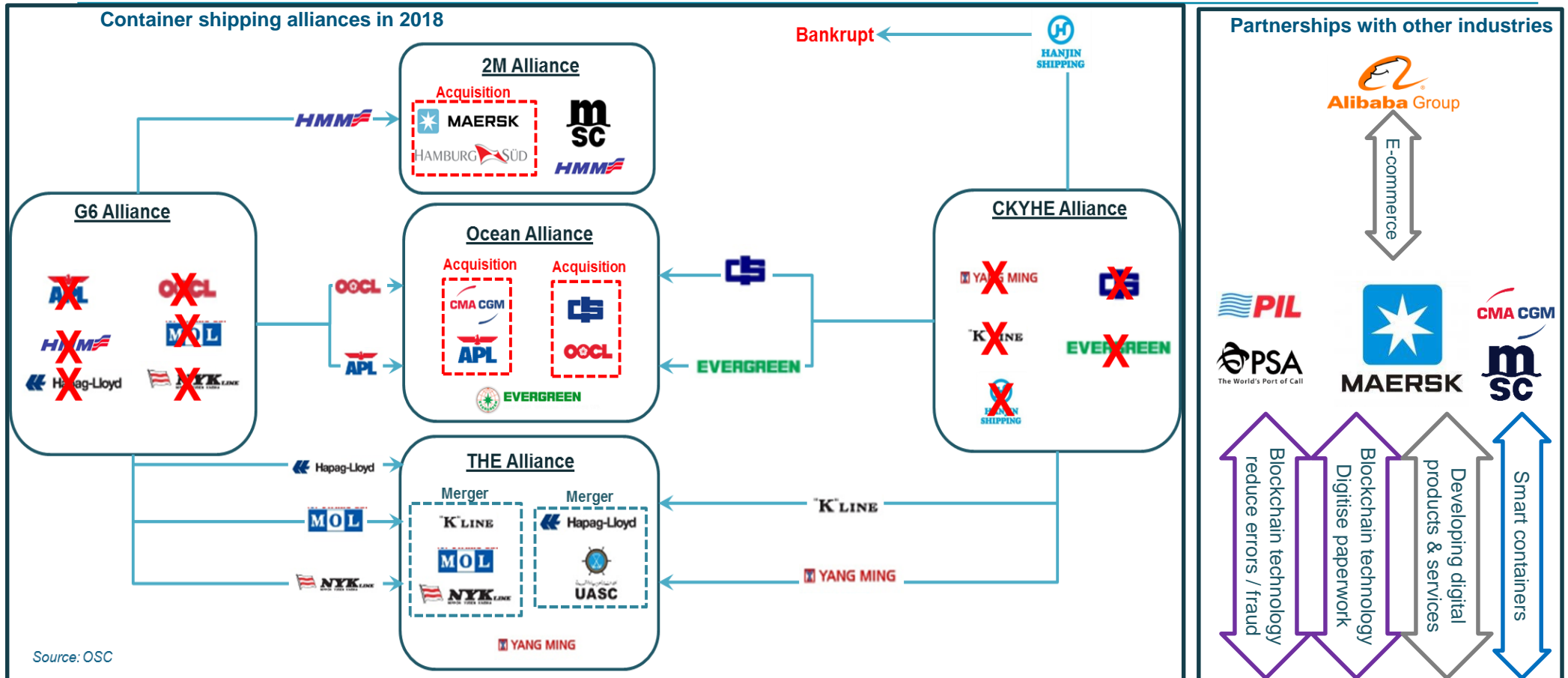
Effect of Container Shipping Market

- Larger container volume exchanges on primary trade routes, but with a lower port call frequency
- Cascading of vessels as replaced ships are moved to other Secondary and Tertiary trade lanes
- Formation of fewer, larger alliances in an effort to maximise vessel utilisation

Ship sizes: Container vessel capacity has increased while dimensions (400m by 59m) remain largely unchanged until recently.



Complete reshape of shipping alliances and acquisitions since 2017.



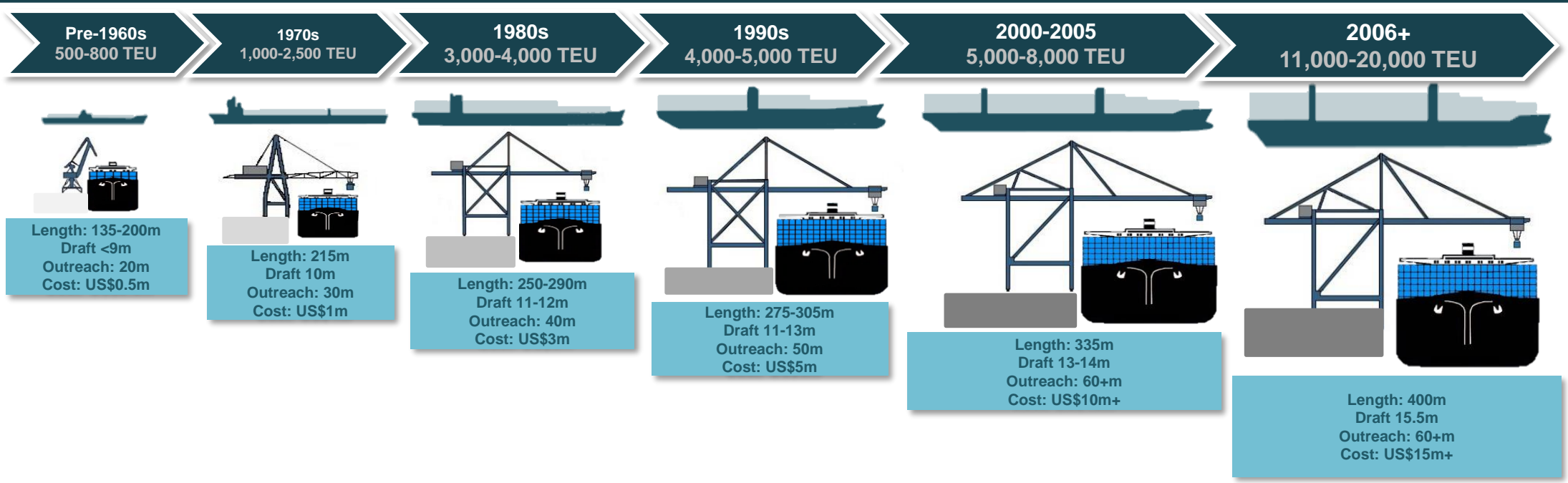
Source: OSC

Top 15 lines outside major alliances

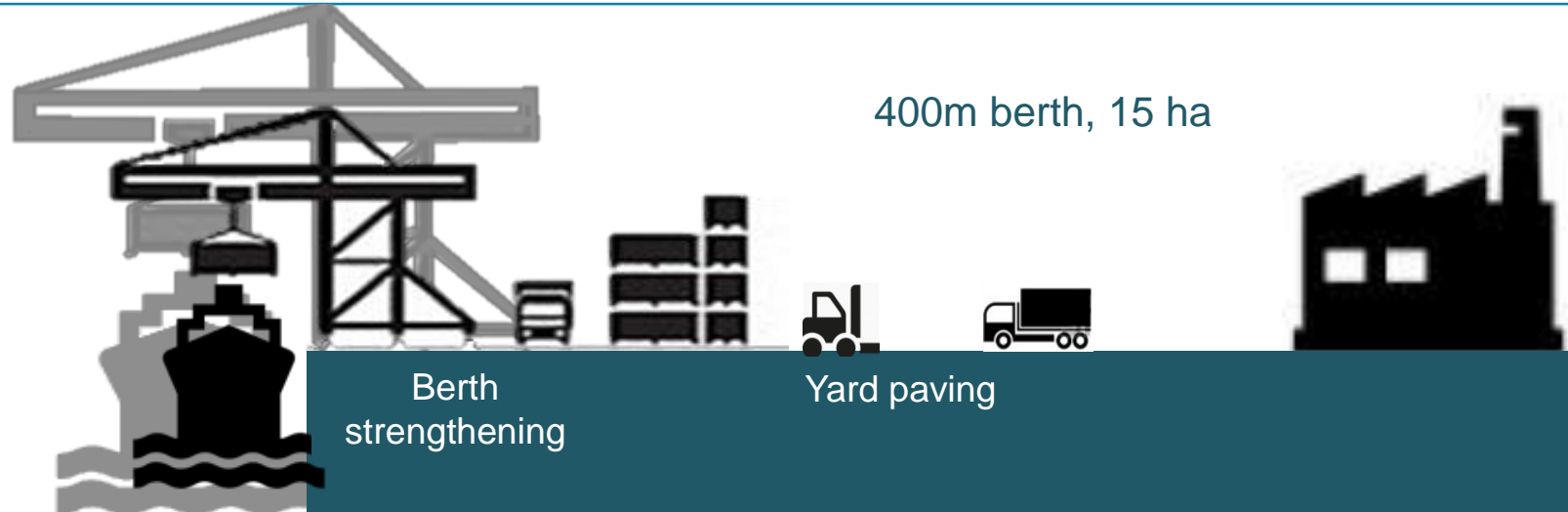


Costs are rapidly increasing for terminals due to larger ships, less frequent calls and larger alliances.

Larger Ships	Less frequent calls	Larger Alliances
<ul style="list-style-type: none"> ■ Larger cranes ■ Additional dredging ■ Other upgrading Quay wall strength, locks, bridges, etc ■ Increased insurance cost 	<ul style="list-style-type: none"> ■ Larger container exchanges Higher peak capacity & productivity required throughout the terminal ■ More flexible labour needed ■ Increased impact when losing a client 	<ul style="list-style-type: none"> ■ Increased bargaining power of Alliances ■ Lower number of port calls consolidated in fewer ports Some ports are bound to lose customers with port selection dictated by strongest alliance member



The increase in vessel sizes has resulted in port authorities and terminal operators incurring capital expenditure to upgrade their facilities.



Channel dredging Berth deepening

Area	Current	New	Estimated cost (US\$ millions)
Channel depth & width	1 km, 242m wide, 15m	295 wide, 16m	4
Berth depth	400m, 15.0m	16.0m	2
Equipment upgrades	4 cranes with 18 rows	4 cranes with 23 rows	40
Yard	15 ha	20ha	30
Total			76

Will the lines pay for these extra costs?

Port operators have responded by slowing or canceling greenfield terminal projects, forming alliances, partnering with shipping lines, or acquiring/merging with competitors.

Slowing or canceling greenfield terminal projects

- Total number of greenfield terminal projects has fallen by almost half compared to 10 years ago

Alliance & Partnerships

- Conference agreement between Port of Miami Terminal Operating Company (Pomtoc) and South Florida Container Terminal (SFCT)
- Co-management Agreement Between COSCO Shipping Ports and Hutchison Port Holdings of several terminal in Hong-Kong

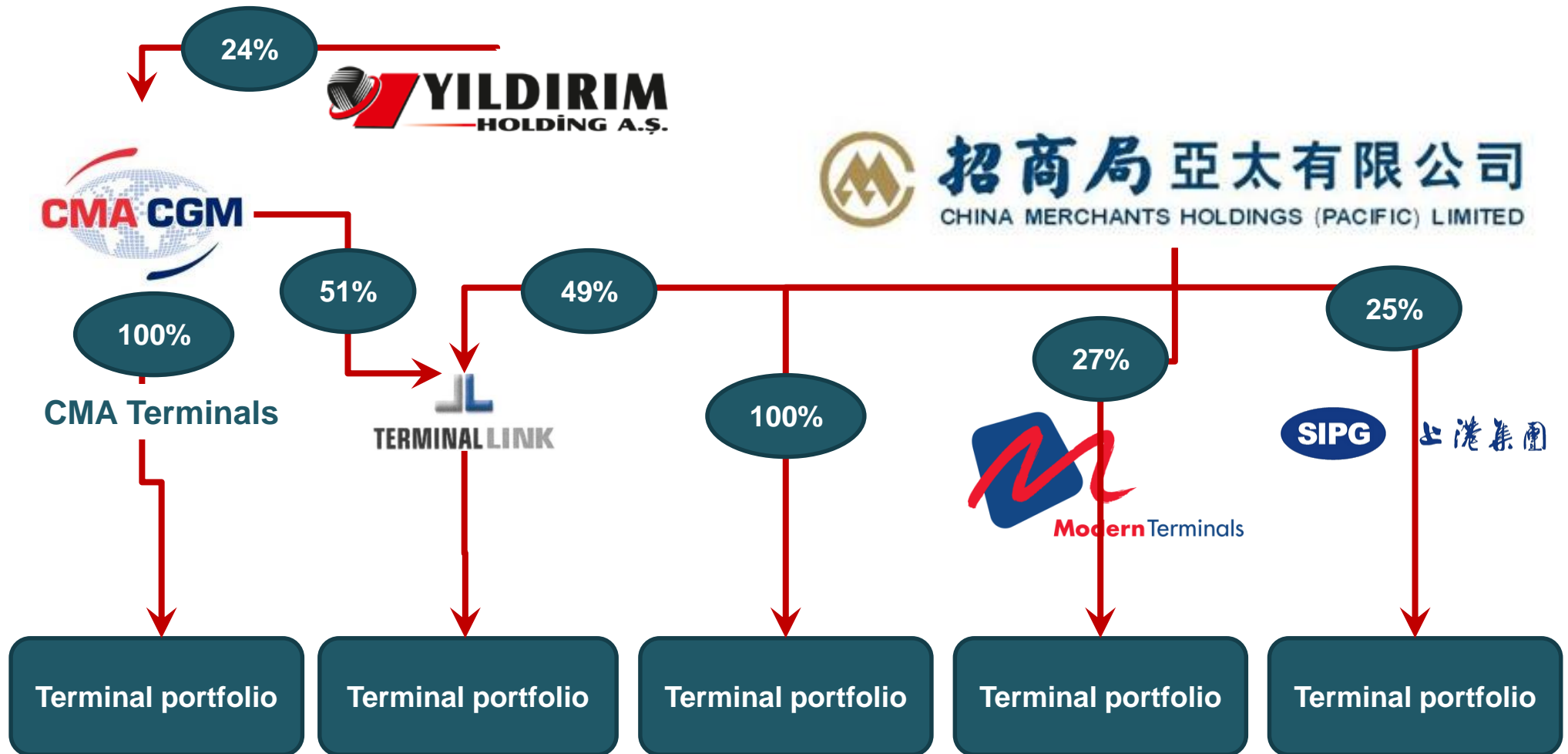
Mergers & Acquisitions

- APM Terminals acquired Grup TCB
- COSCO SHIPPING Ports acquire 40% interest in the Vado Terminals in Italy
- COSCO SHIPPING Ports acquire 35% interest in Euromax Terminal in Rotterdam
- COSCO SHIPPING Ports increase its stake in Qingdao Port International (QPI) to 18.41%
- DP World acquired an additional 23.94% stake in Pusan Newport Company (PNC) in South Korea
- DP World creating an investment fund with Caisse de dépôt et placement du Québec (55/45) to jointly invest in ports and terminals

Joint venture deals with shipping lines

- CMA CGM and PSA create a container terminal joint venture in Singapore
- COSCO Shipping and PSA create a container terminal joint venture in Singapore
- MSC and PSA create container terminal in Antwerp

Terminal Operator ownership complexity



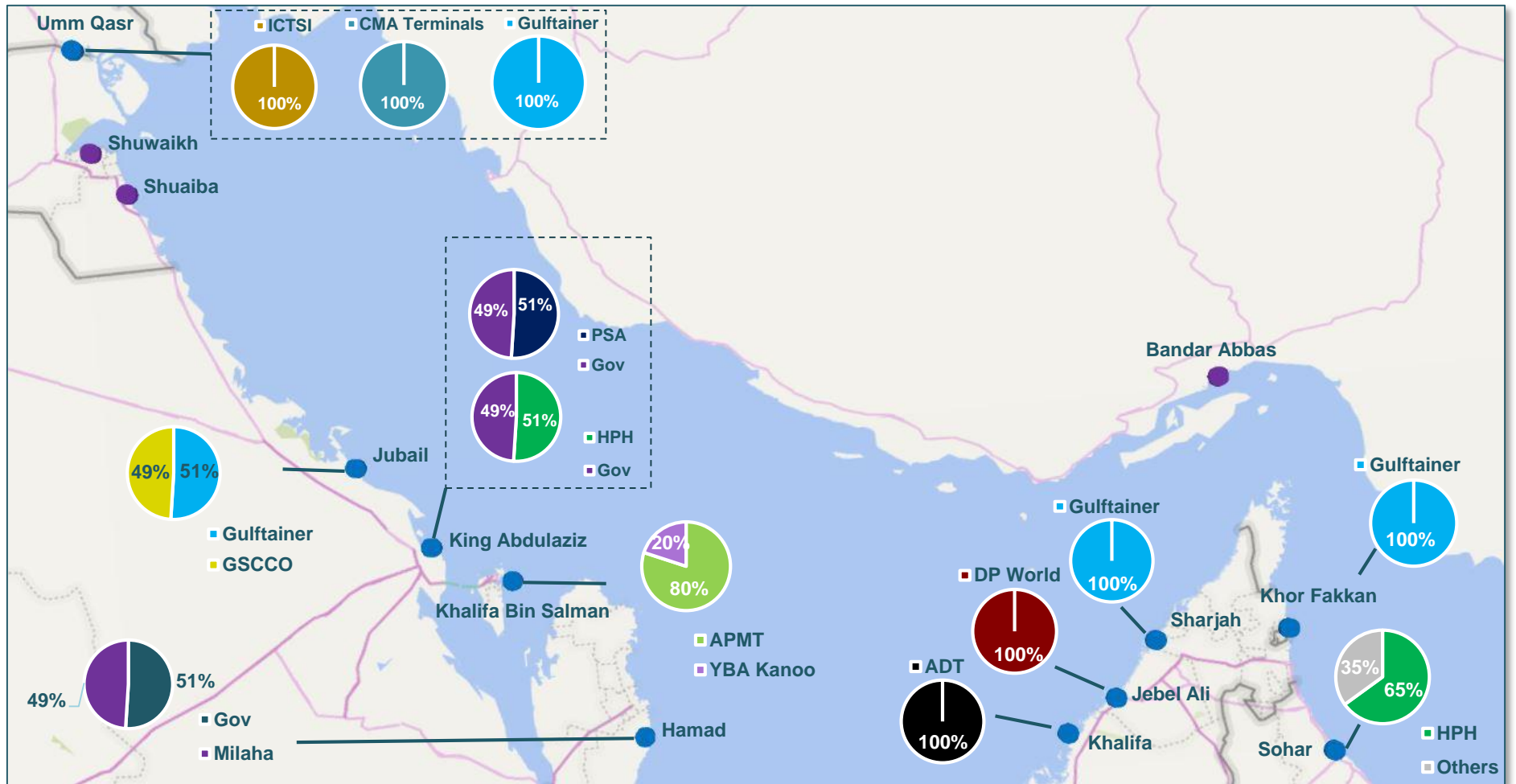


Regional Container Shipping Market

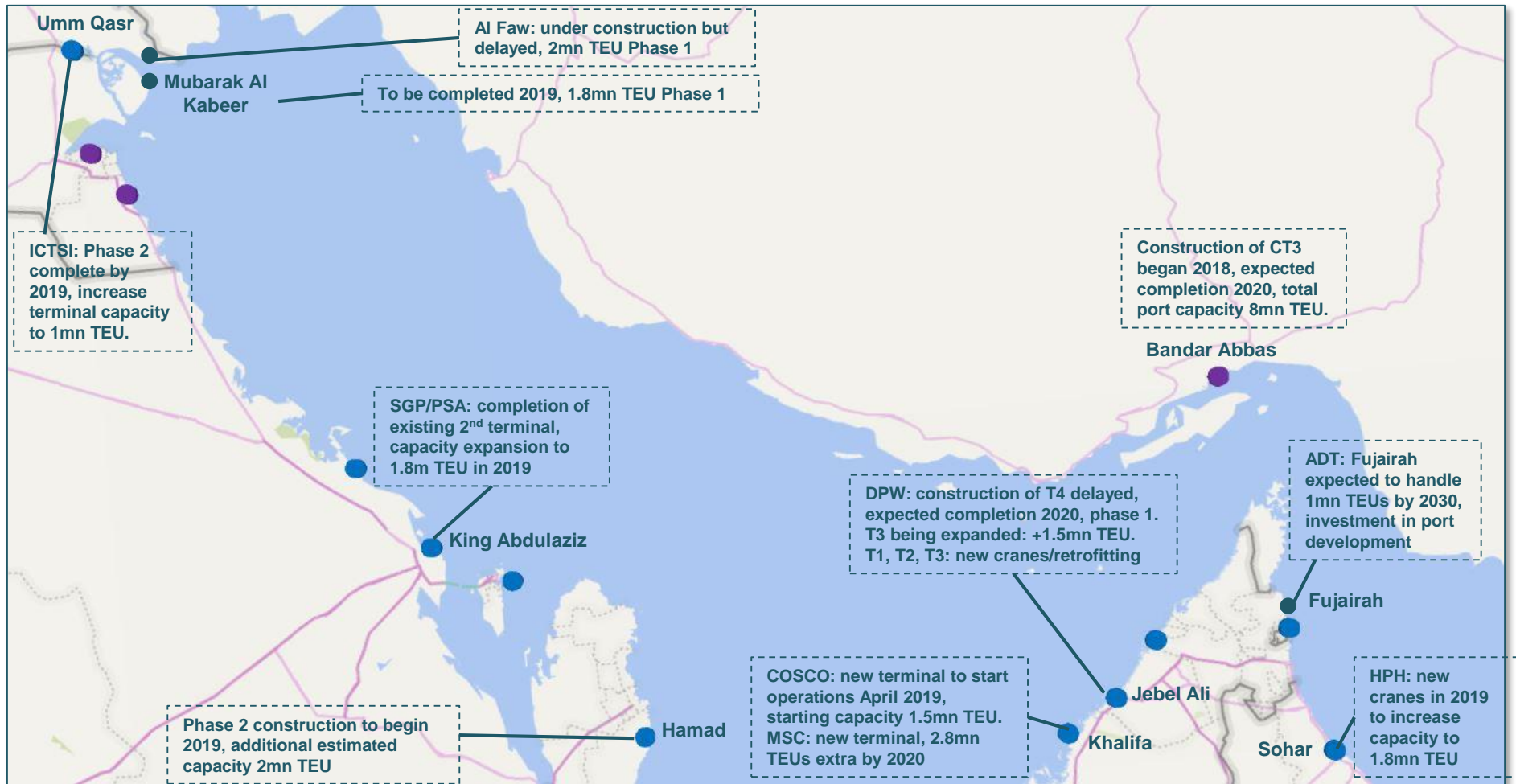
Important regional container ports and their container throughput (TEU)



Port ownership



Port Development Plans



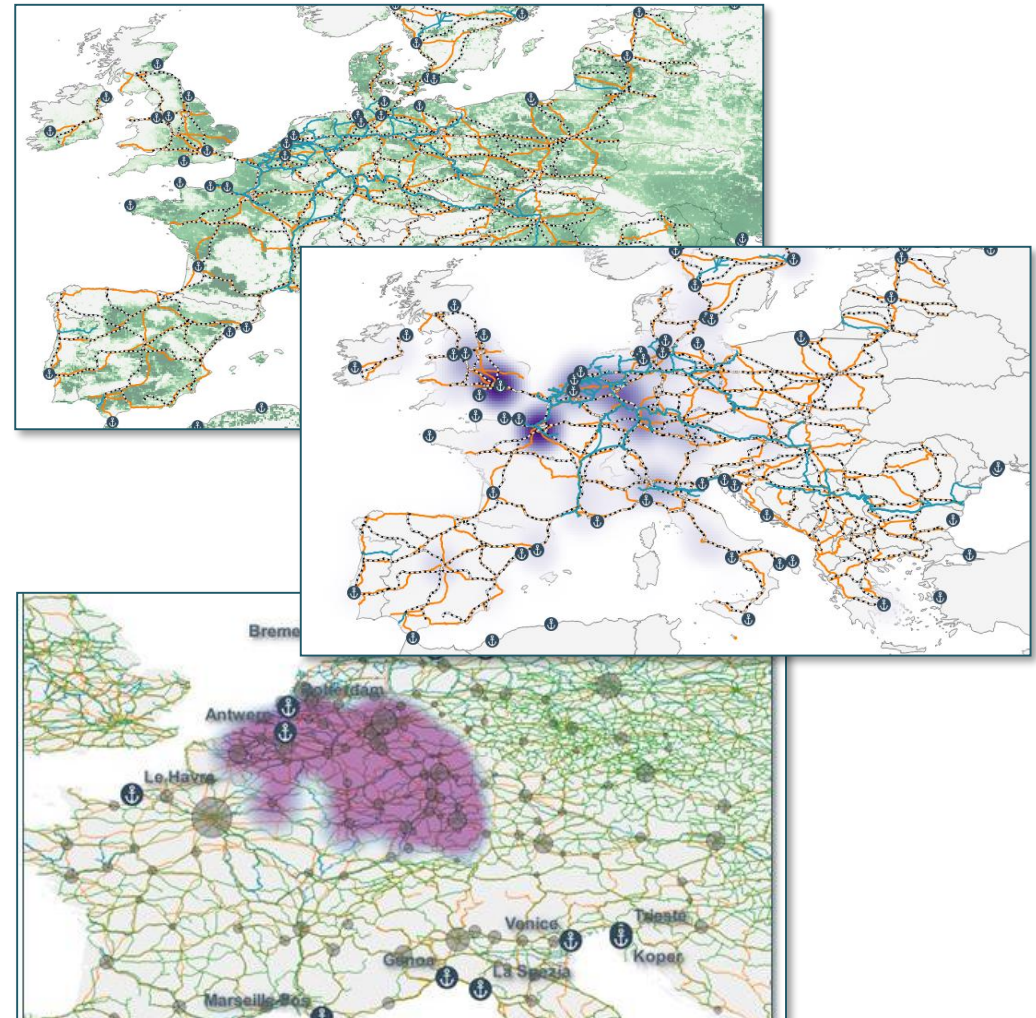
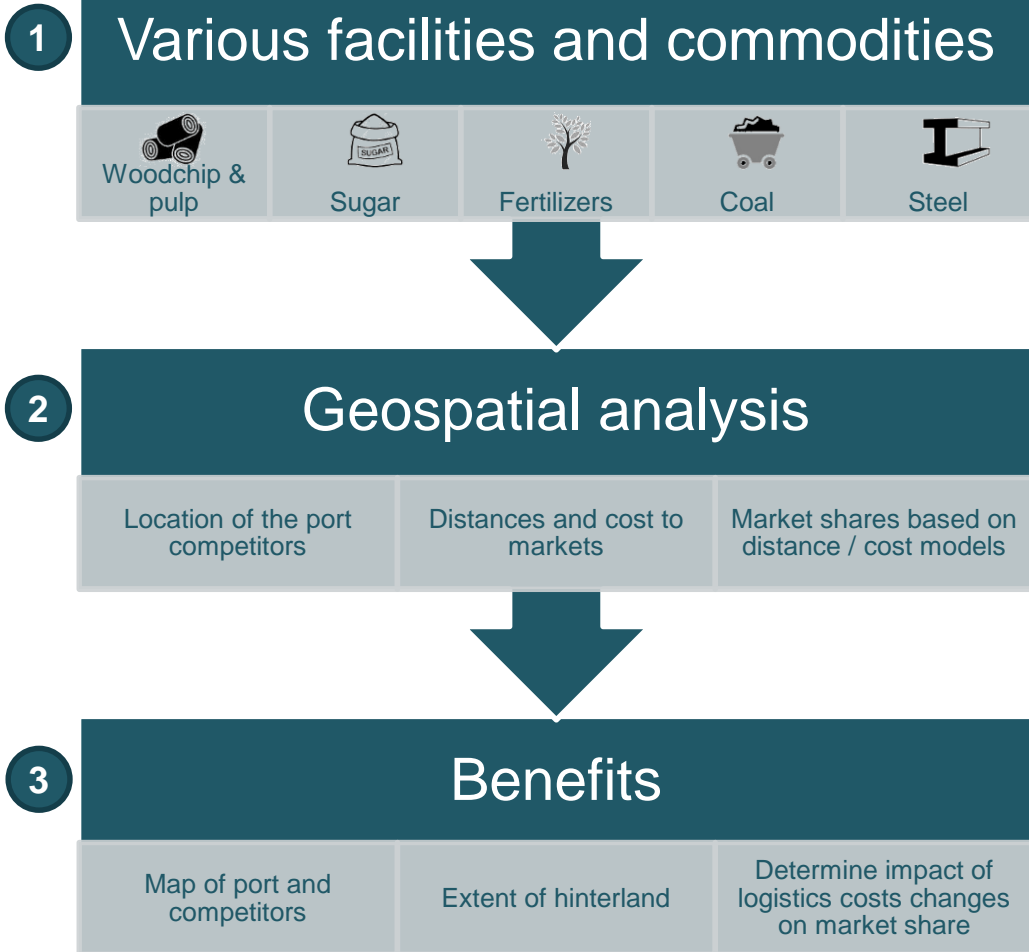
RHDHV's unique Geospatial Tool



RHDHV's unique Geospatial Tool

RHDHV's unique Geospatial Tool

We have developed a powerful proprietary Geospatial tool for Maritime advisory projects. This can be used to analyse and visualise the trade and hinterland of a group of ports within various markets.



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