THE 30th IAPH

WORLD PORTS CONFERENCE

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Bali Nusa Dua Convention Center, Bali - Indonesia

AN OUTLOOK OF THE SHIPPING INDUSTRY, BETWEEN CHALLENGES AND OPPORTUNITIES…

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Summary

- ***EVOLUTION OF THE SHIPPING INDUSTRY***

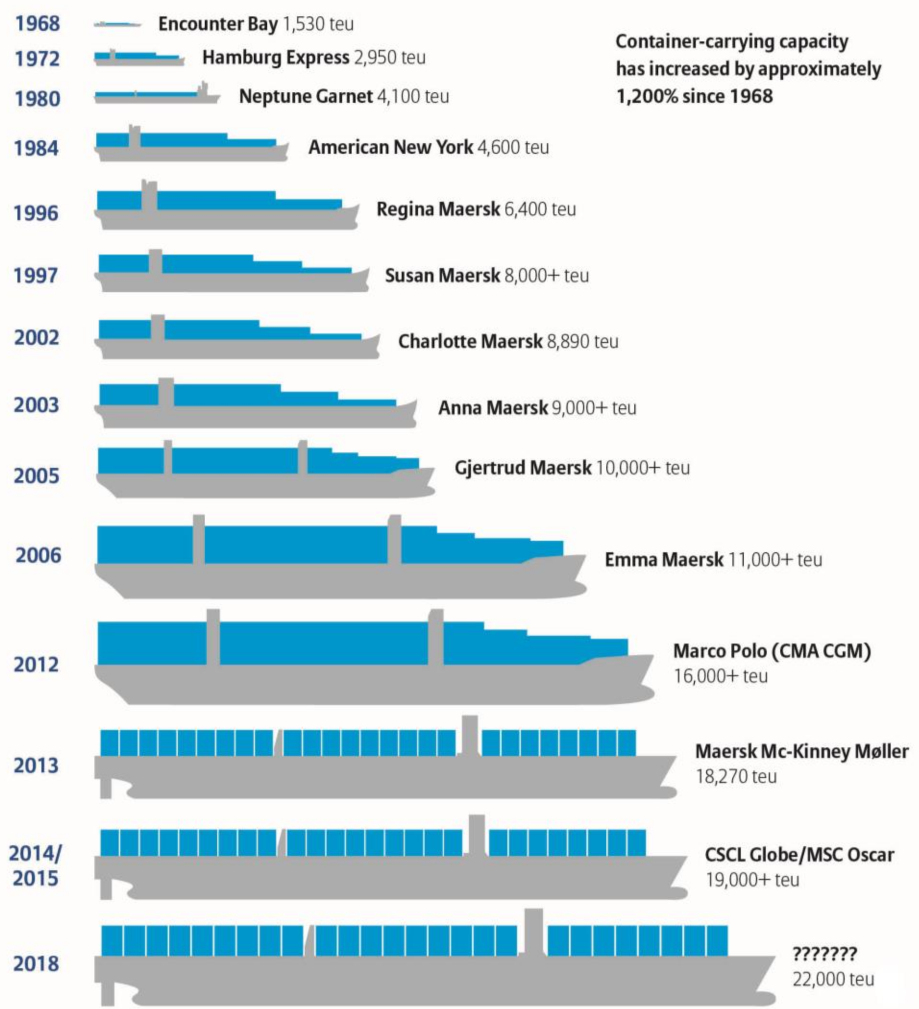
- The eternal race for the gigantism, a temporary end?
- The shipping alliances.
- The container industry and its vicious circle: necessity to consolidate.
- The digitalization, a new era.

- ***EVOLUTION OF THE SHIPPING ROUTES***

- New emerging markets, who is next after china?
- Hub strategies potentially affected by shipping alliances ?
- Intra region, domestic, a new activity trend.

EVOLUTION OF THE SHIPPING INDUSTRY

50 years of container ship growth

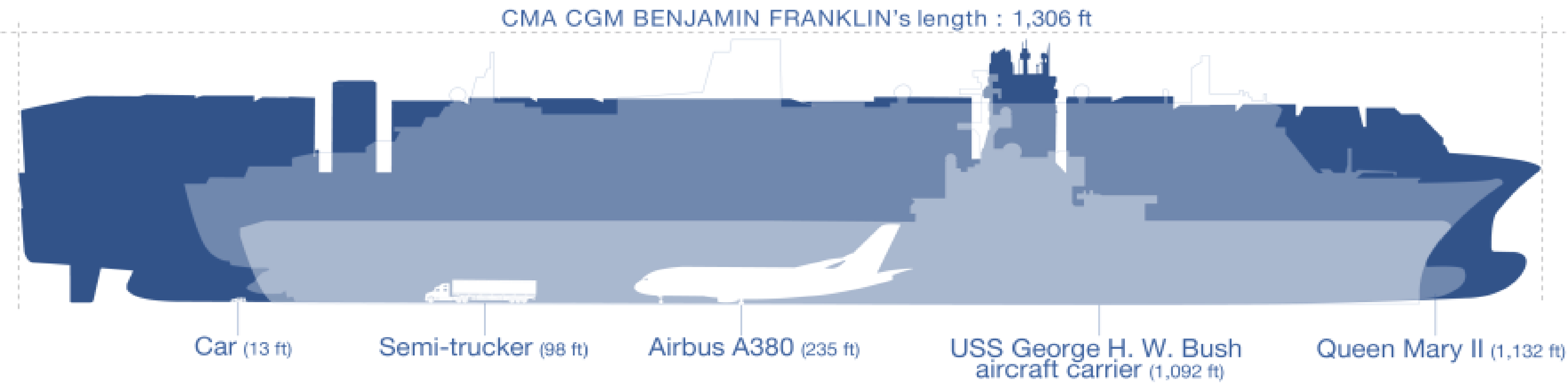


Graphic: Allianz Global Corporate & Specialty.
Approximate ship capacity data: Container-transportation.com

- **Container ships have been getting bigger since they began operating in liner services over 50 years ago because the increased size produces increased operating efficiency and improved environmental performance.**

- **Some of the world's biggest container ships are about 1,300 feet long - that's nearly 400 meters or the distance around an Olympic running track - with a maximum width of 180 feet (55 meters). Their engines weigh 2,300 tons, their propellers 130 tons, and there are twenty-one stores between their bridge and their engine room. They can be operated by teams of just thirteen people and a sophisticated computer system . If that number of containers were loaded onto a train it would need to be 44 miles or 71 kilometers long!**
- **This size increase has been exponential; ships doubled in volume in 20 years between 1975 and 1995, and then almost doubled again in the following decade, doubling yet again between 2005 and 2015. And it's not over yet! Plans are to continue increase size to 21 100 TEU* by 2017.**

What are we talking about ?



TECHNICAL INFORMATION

- **Nominal Teus 17859**
- **Teus 14TH 11889**
- **Reefer Point 1400**
- **S.DWT 185070**
- **S.Draft 16.00**
- **L.O.A 399.20**
- **Beam 54**
- **GT 178228**
- **NT 116356**

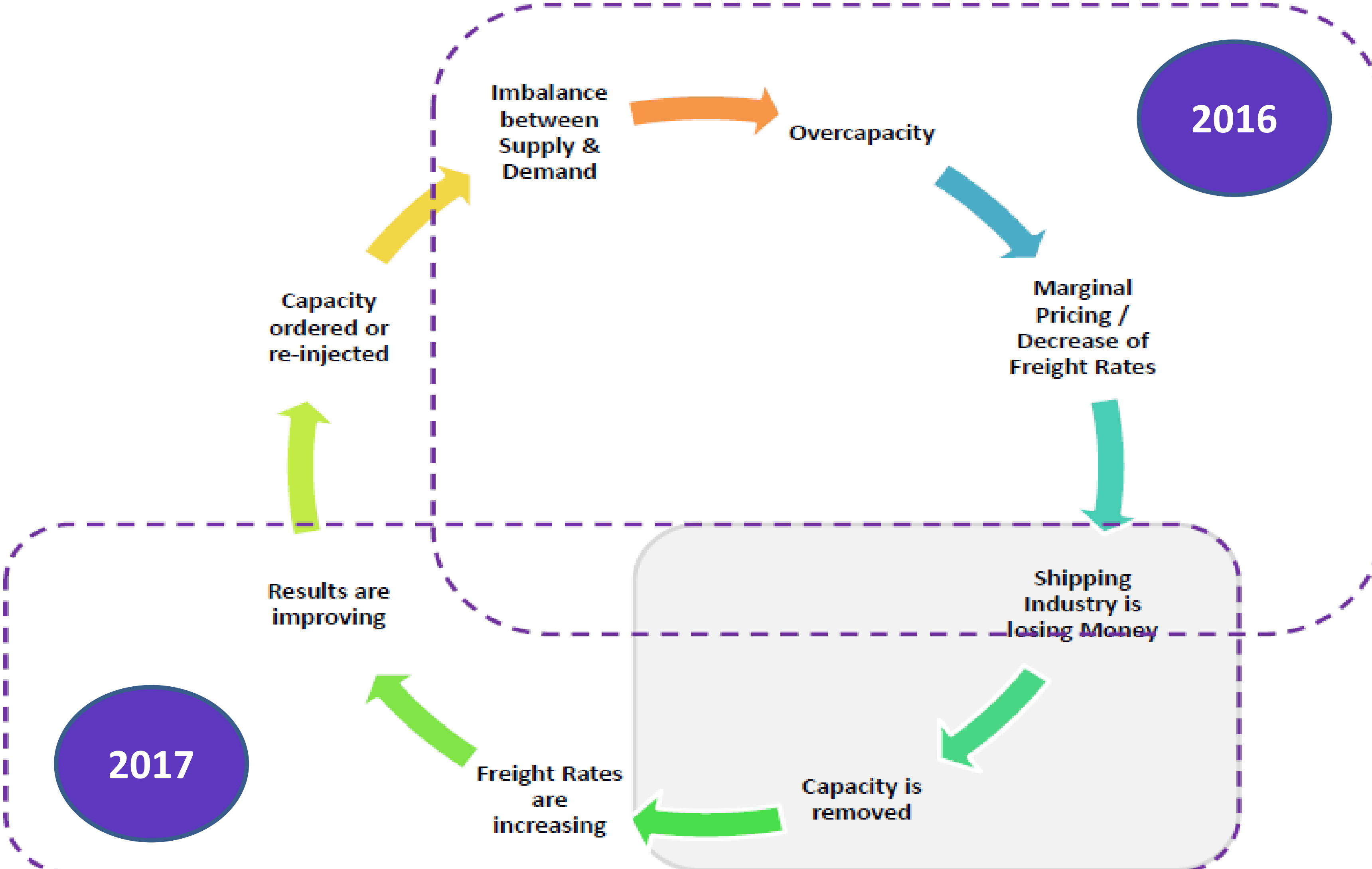
Did you know that the 25 largest ships capitalize 460 000 Teus capacity in total?

Where do we go?

- How to accommodate tomorrow those big ships in your terminals, plan being to go over 22 000 Teus!
- How to fill those ships when demand is not there?
- Although it permits to remain cost competitive, the old model of growth through acquiring new capacity, building new ships is not working.

SHIPPING INDUSTRY IS REDESIGNING ITSELF

The vicious circle of shipping

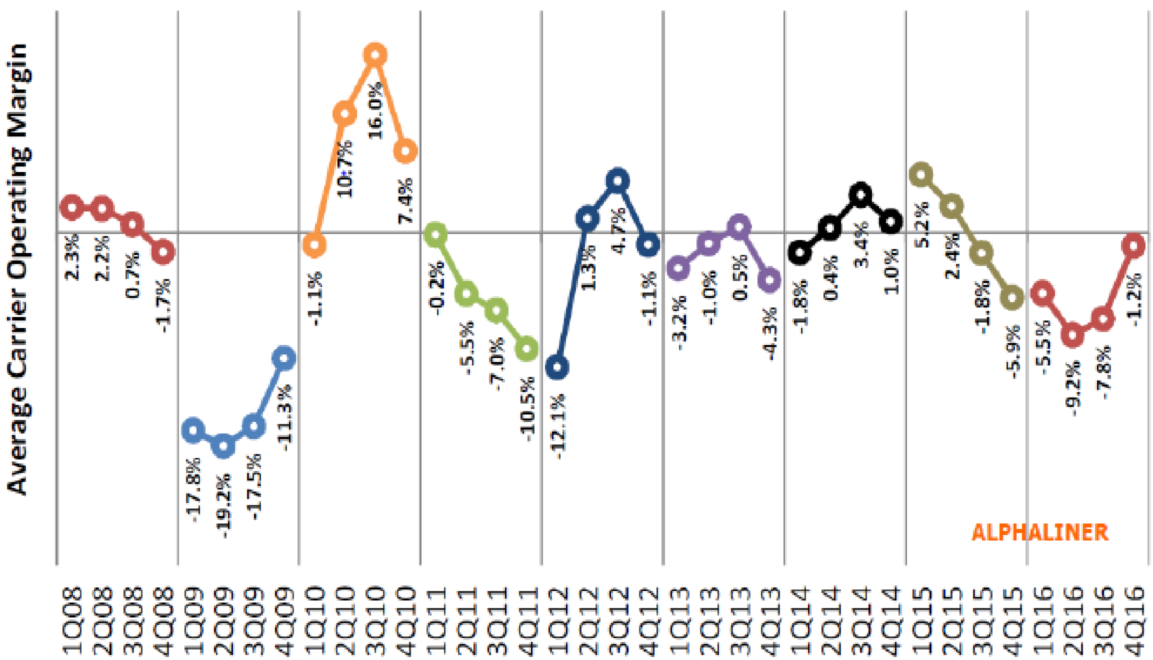


Freight rates are under **heavy pressure** from POST CNY 2015…

- Global shipping lines are projected to report a loss of $5.2 billion in earnings before interest and taxes in 2016, the worst since 2011.
- The international Monetary Fund estimates that world trade will climb 3.8% in 2017 after expanding last year at the slowest pace since the global financial crisis.

…leading to heavy losses

Main carriers operating margin by quarter : 2008-2016



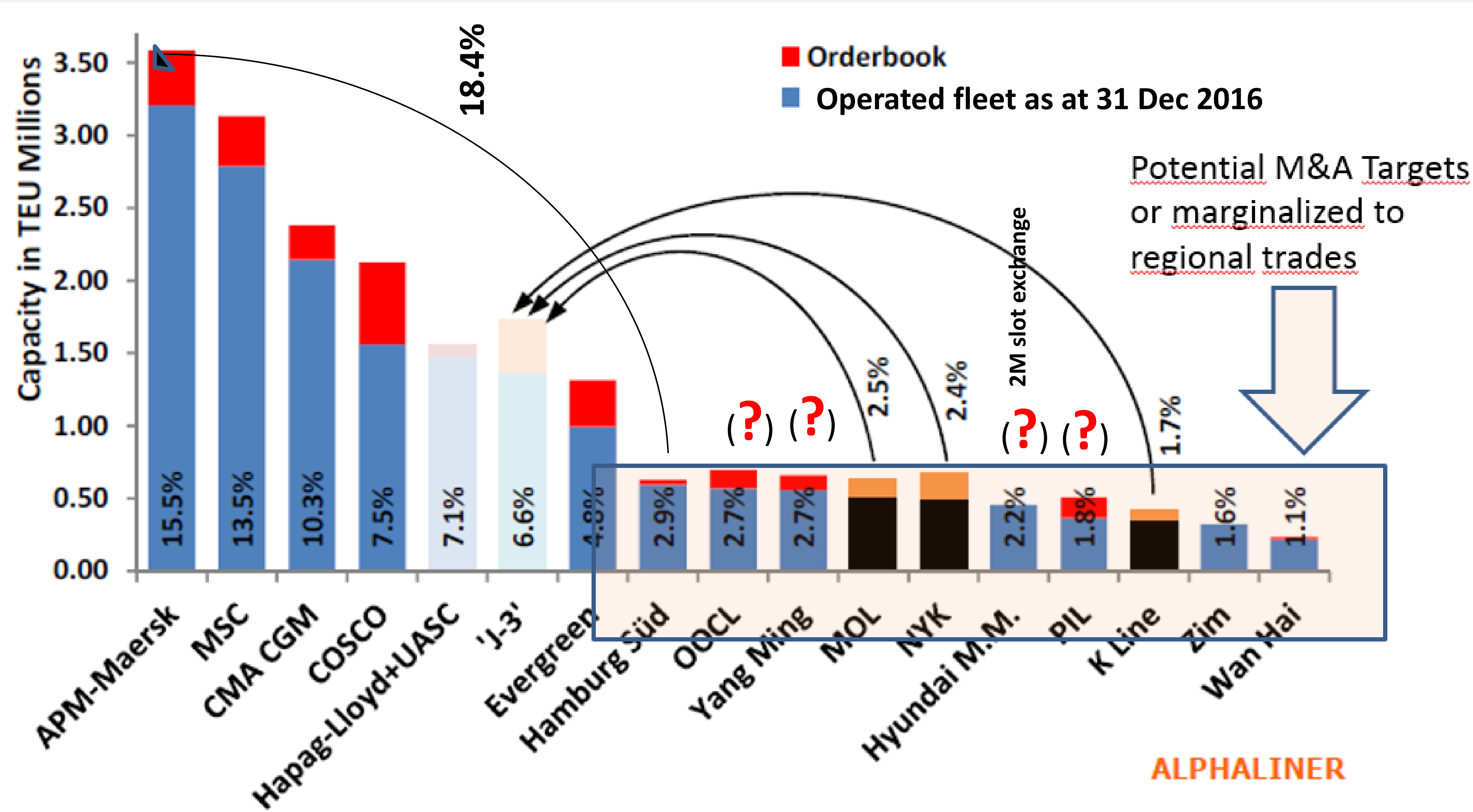
Average of CMA CGM (incl APL to 2Q 2016), CSCL (to 1Q2016), EMC, Hanjin (to 3Q 2017), Hapag-Lloyd (incl CSAV to 2014), HMM, KL, Maersk, MOL, NYK, WHL, YML, Zim

Source: alphaliner

Main carriers operating margins
FY 2016
Container Shipping Operations Only

In US$ M	Revenue	Operating Profit	Margin %
Wan Hai	1,779	58	3.3%
Hapag-Lloyd	8,546	140	1.6%
CMA CGM	15,977	29	0.2%
Maersk	20,715	-404	-2.0%
Zim	2,539	-54	-2.1%
NYK	5,383	-117	-2.2%
OOCL	5,270	-185	-3.5%
K Line	4,691	-273	-5.8%
MOL	5,518	-342	-6.2%
EMC	3,863	-299	-7.7%
COSCO	10,022	-856	-8.5%
Yang Ming	3,581	-470	-13.1%
HMM	3,214	-595	-18.5%

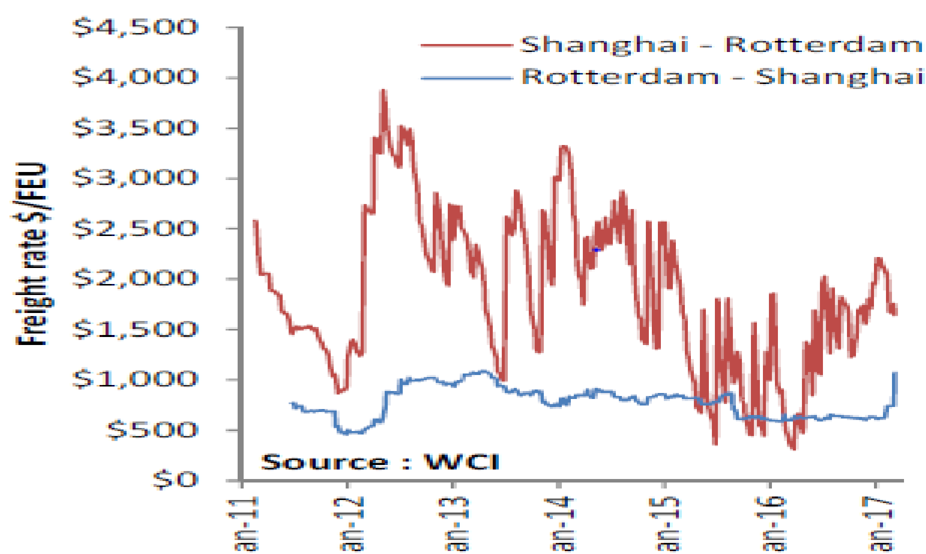
Necessity to merge to survive or disappear!



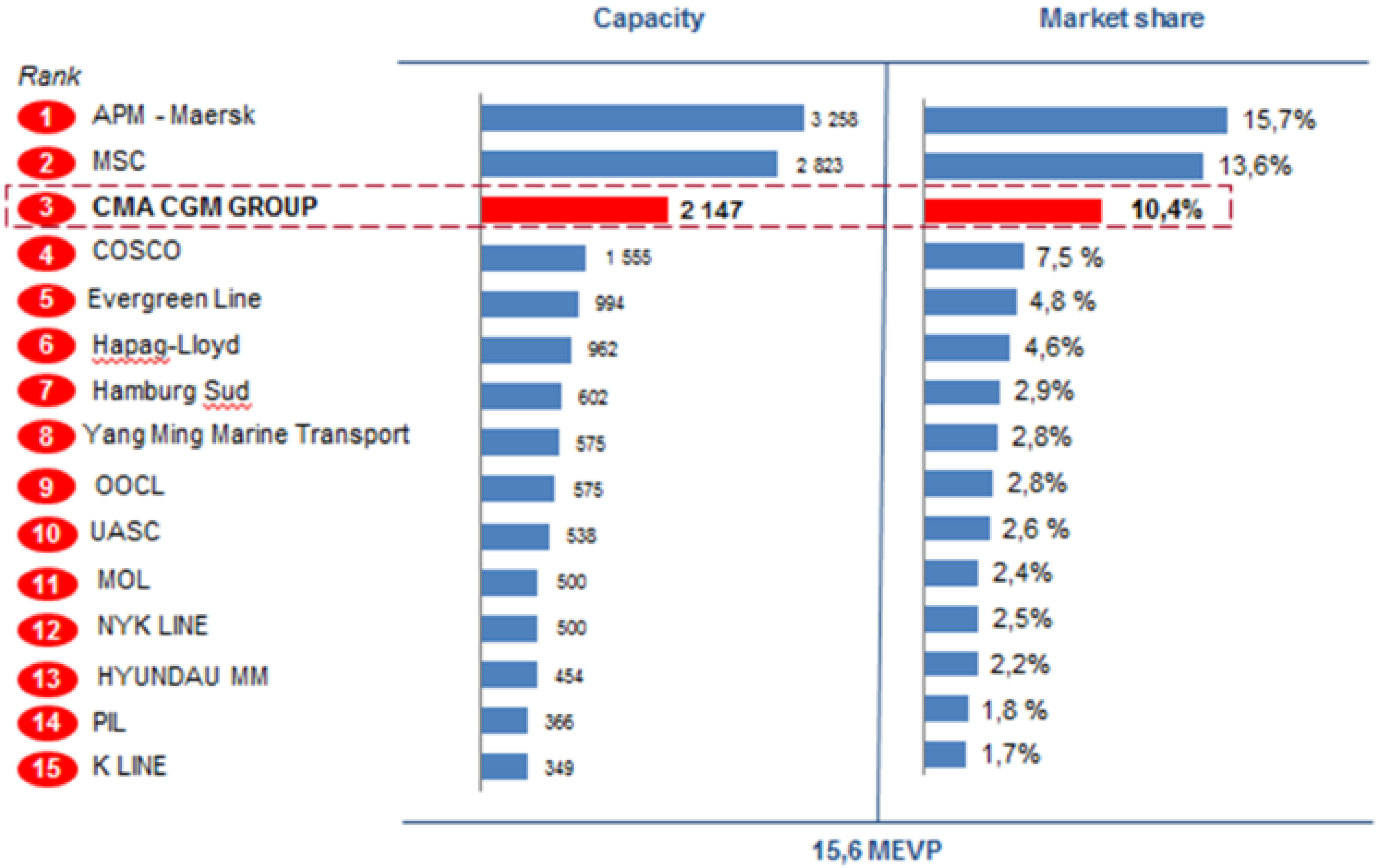
2017 Outlook – slightly brighter but to a limited extend

Consolidation moves not yet over and still other spectacular news to come. This first consolidation phase enabled shipping lines to introduce some stability, and meet the demand.

Freight rates on the WB (Asia to Europe) trade jumped to 1600/40 in January 2017 compared to 400 USD / 40' a year ago, while from Europe to asia we noticed rates over 1000 USD/40 because of capacity issues in March 2017!



Global shipping market in 2017



Source : Alphaliner, publishing date 24 Feb 2017

Shipping alliances, a necessity

I. Shipping lines can rationalize their resources
II. Shipping alliances have instigated creation of mega ships and mega ports
III. Lines are able to offer more global coverage

Why Do shipping lines Need Shipping Alliances?

Operational costs in shipping account for over 67% of the total cost of running a shipping line operation. Out of this, 46% relate to Bunker costs and 21% relate to port charges, both of which are variable costs (means not fixed costs).

Shipping lines realized that under the current economic conditions, they cannot provide a service coverage by working alone as it will mean tying up their ships on a specific route for weeks and the other routes remaining not served.

One of the main aims of shipping lines creating shipping alliances or vessel sharing agreements is to cut these variable costs, and the best way of doing this is through the usage of common resources such as ships, port terminals and networks around particular routes.

Entering into alliances seems to be the right fit for everyone, as larger shipping lines can rationalize their resources in an alliance whereas the smaller lines can enjoy the extended service coverage without have to invest in increasing their fleet size.

What does a shipping alliance do & not do?

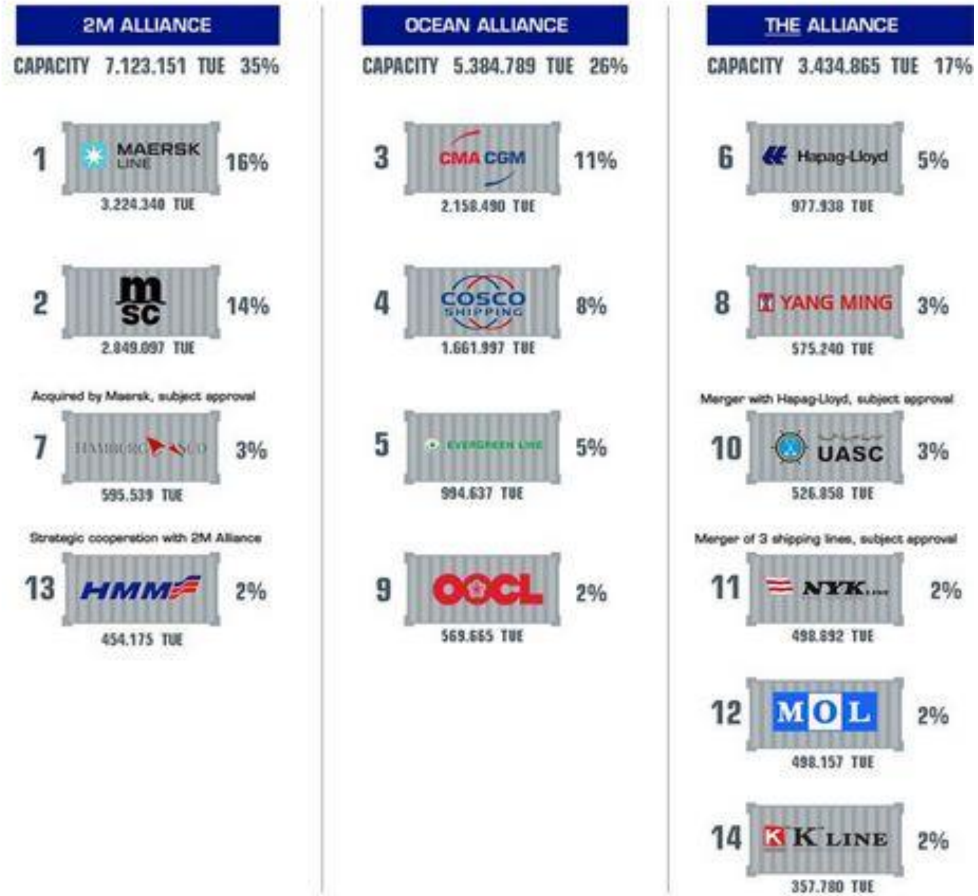
A shipping alliance behaves pretty much in a similar way as a liner operation of an individual shipping line, but provides more coverage and scope.

In the recent years, the creation of shipping alliances has brought mega ships and mega ports into the fore and such alliances allow better allocation of the shipping lines' resources, which naturally reduces operational costs, allows the expansion of service coverage, optimizes the ports of call and ultimately achieves economies of scale.

What an alliance does NOT do is to share commercial information such as cargo information, shipping rates, customer information etc. Those still remain under the control of the partners within the alliance and are not shared.

ALLOWED	NOT ALLOWED
- VSA, SWAP - Operations cost - Port & network optimization - Economy scale	- No rates - No customer information - No cargo information - No commercial information

Operations alliances, an effective method to remain competitive



- These three alliances represent 77.2% of global container capacity and a whopping 96% of all East-West trades. Ocean Alliance offers the most services, with some 40 loops. THE Alliance follows with 32 services and 2M with 25. Among the changes, THE Alliance and Ocean Alliance will run 11 weekly Asia-northern Europe routes. 2M has also increased its services on this route from five to six. That's mainly to cater to the additional slots under their agreement with HMM and Maersk's takeover of Hamburg Süd.

- According to a recent Drewry report, Ocean Alliance's gets its lead from its seven Asia-Middle East and -Red Sea services. In comparison, THE Alliance offers only one such service and 2M none. With regards to the Asia-US West Coast routes, Ocean Alliance has 13 services, THE Alliance 11 and 2M only five.

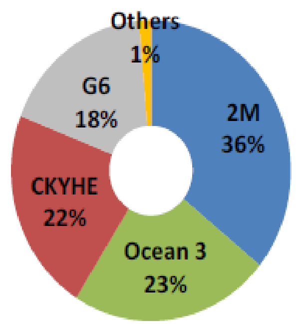
- More recently, Hapag-Lloyd and UASC postponed their final merger date as a result of unexpected delays. The merger will now take place at the end of May as opposed to the end of March, which would have been in time for the new alliances reshuffle. However, this is unexpected to affect the start date of THE Alliance. It will set sail on April 1st, 2017 as planned.

Trade capacity share by alliances

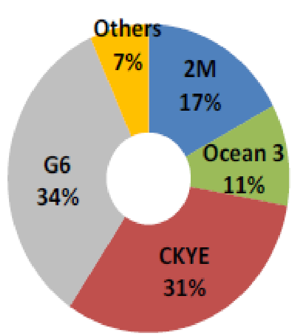
FROM 4 ALLIANCES TO 3

2016 Alliances

FE Europe Med

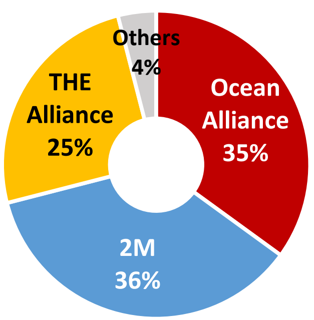


FE North America



2017 Alliances

FE Europe Med



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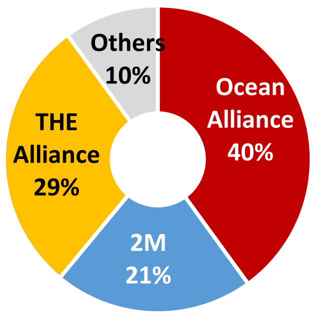
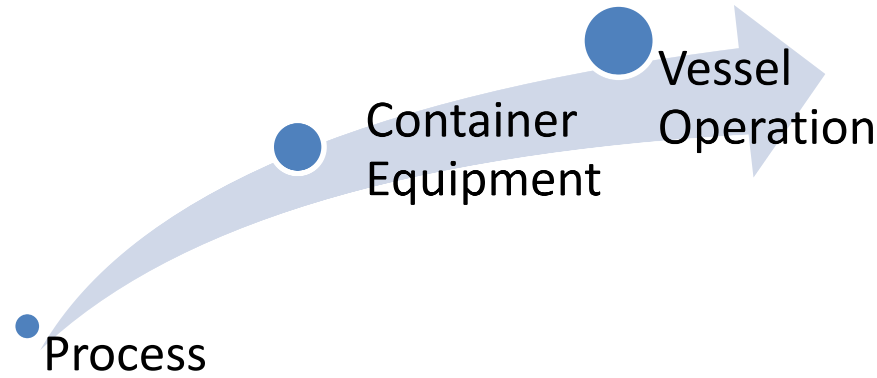


Digitalization as a solution to our operation issues?

Problem	Solution	Proposal
• User behavior and low awareness • Numerous and disharmonized Regulation • Dynamic International Policy • Data Security issue • Multiplatform data entry with different source • Infrastructure of Internet Connection with high cost	• Upgrade competency in human resource • Harmonizing Government Regulation • Stream line Policy • Data encryption and Law enforcement in Electronic Transaction • Data interconnection • Improve Infrastructure of Internet connection at Port area	• Synergy between Government, International Maritime Organization and Business owner to collaborate in drafting Regulation and Legislation • Infrastructure development planning • Encourage digitalization with campaign / publication

E – volution from manual to digital



Digitalization in Shipping covering …

Process
- B2B E-Commerce Transaction
- EDI Connection

Equipment
- Smart Container
- Remote Container Monitoring

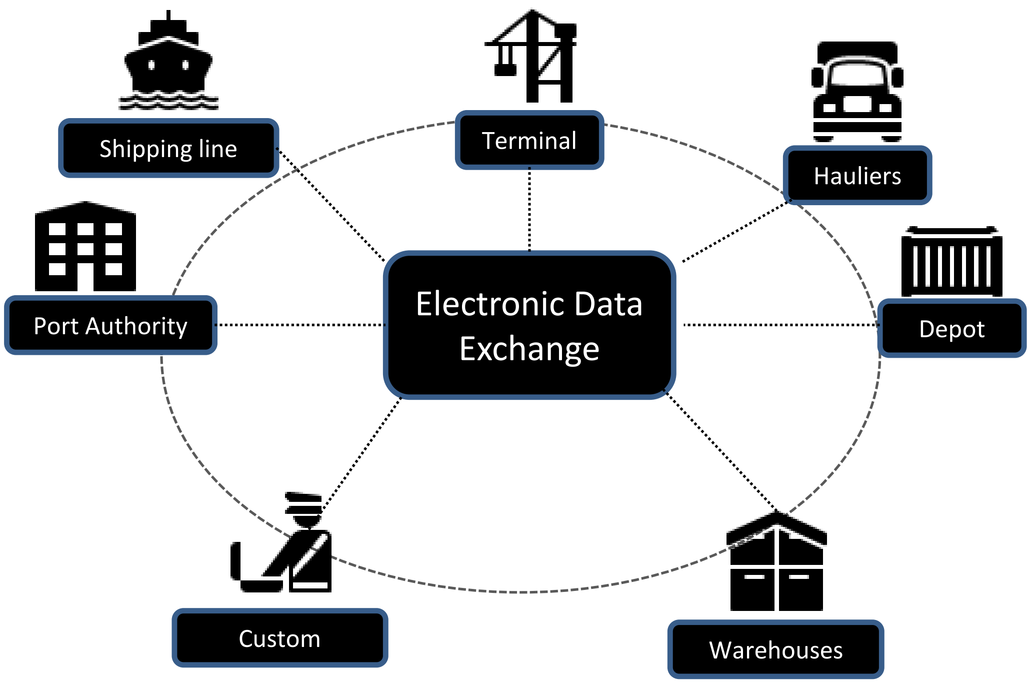
Operation
- Ship Automation and Control System

Global view of the digitalization

AUTOMATED ELECTRONIC DATA EXCHANGE

Automation of ship reporting functions has taken a big step forward with two important decisions by IMO. One concerns the introduction of the electronic exchange of information as a universal, binding requirement for the purpose of facilitating the business of international maritime traffic.

B2B E-Commerce Transaction (Shipper-Carrier-Consignee)	*EDI connection between service provider (Depot-Haulier-Liner-Custom-Terminal)*	*Vessel and Container Information from electronic equipment*



- *Improve efficiencies at every point in supply chain*
- *Transform Industry to Paperless and cashless Transaction*
- *Electronic notification and online Information*
- *Exchange data flow for entire supply chain process*

Enhance the supply chain with added value!

Digitalization in Process

• B2B E-Commerce Transaction

Manage shipment information through eCommerce, enabling end-to-end management of transport chain. View, create, amend and re-use shipment information, at all stages of the shipping life-cycle.

Benefit

- ✓ Transaction by website at any time and place
- ✓ Online Documentation
- ✓ Electronic Notification by email
- ✓ Re-use shipment information time to time
- ✓ Monitoring Cargo and Transaction by website

• EDI connection

Data Interconnection between Public Service Company and Government is a must to replace manual data input and enrich data flow one to another owned by related parties (Container Depot, Intermodal transportation, Shipping Line, Terminal Operator, Port Authority, Custom).

Benefit

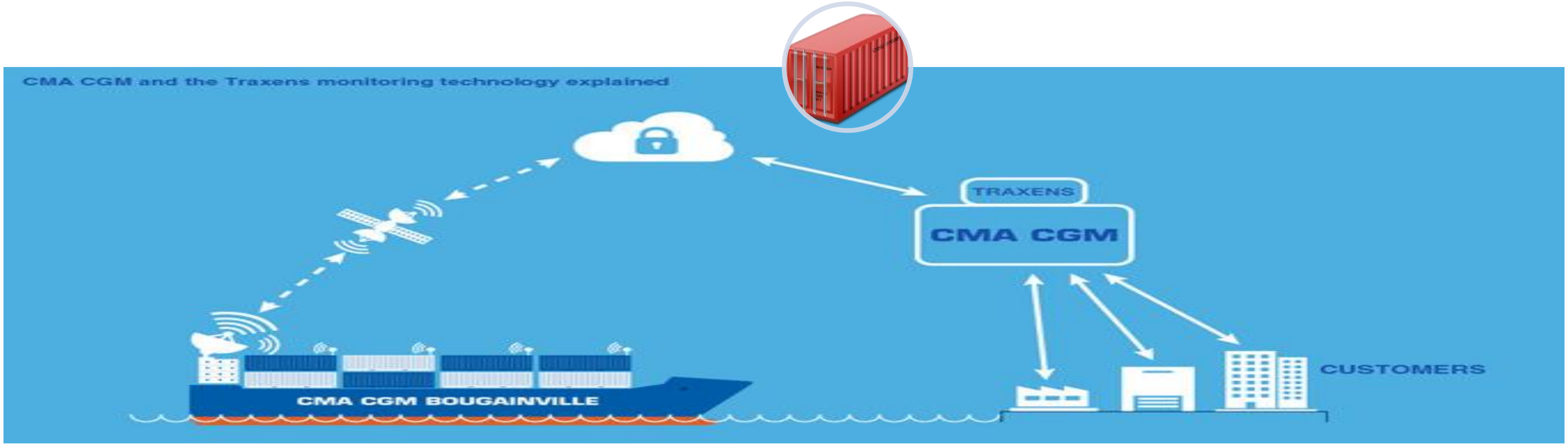
- ✓ Eliminate process re-typing to input data
- ✓ Replace paper document with Electronic data
- ✓ Efficient in processing time
- ✓ Exchange Data flow for specific needs
- ✓ Replace physical interaction with Electronic approval

Digitalization in Operation

• Electronic Control System On Board

Platinum navigation control system comprising radars linked to three multifunction multi pilot workstations and an *Electronic Chart Display Information System (ECDIS)* pilot for centralized control of all main radar, ECDIS and conning operations in addition to those for automatic steering, track control and voyage planning. Supplementary sensors for the integrated bridge configuration include AIS, VDR, GPS, Doppler log and echo sounder naiads as well as SAM Electronics' new Bridge Navigational Watch Alarm System (BNWAS).

Digitalization in equipment



- **Smart Container**

Unique technology which transforms containers into smart connected objects. This technology transforms standard containers into smart, connected, objects and introduces the multimodal transportation system into the Big Data era.

The TRAXENS' equipped smart containers will be able to communicate among themselves and to the ship's communication infrastructure by using built-in relay antennas, allowing even the most deeply hidden container to be connected.

- **Real-time container monitoring through hi-tech devices**

The TRAXENS system collects real-time data throughout the container's transport whether on land or at sea, adding considerable value to the shipping line and to its customers, insurers, and customs.

A wide range of data from each container can be gathered and transmitted to the Shipping Line : location, temperature, humidity level, vibrations, impacts, attempted burglary, customs clearance status and more.

The devices provide even greater added value in the refrigerated transport of perishable goods. They can remotely control and adjust the temperature of refrigerated containers and will allow resource optimization for routine inspections.

EVOLUTION OF THE SHIPPING ROUTES

Who is next after china?

Country	CAGR to 2021 (%)
Vietnam	37.4
Philippines	24.2
Indonesia	15.8
Malaysia	10.5
India	10.3
South Korea	8.4
China	7.1
Thailand	6.6
Japan	5.5

Source: IGD

Vietnam Tipped to be Asia's Fastest-Growing Convenience Market

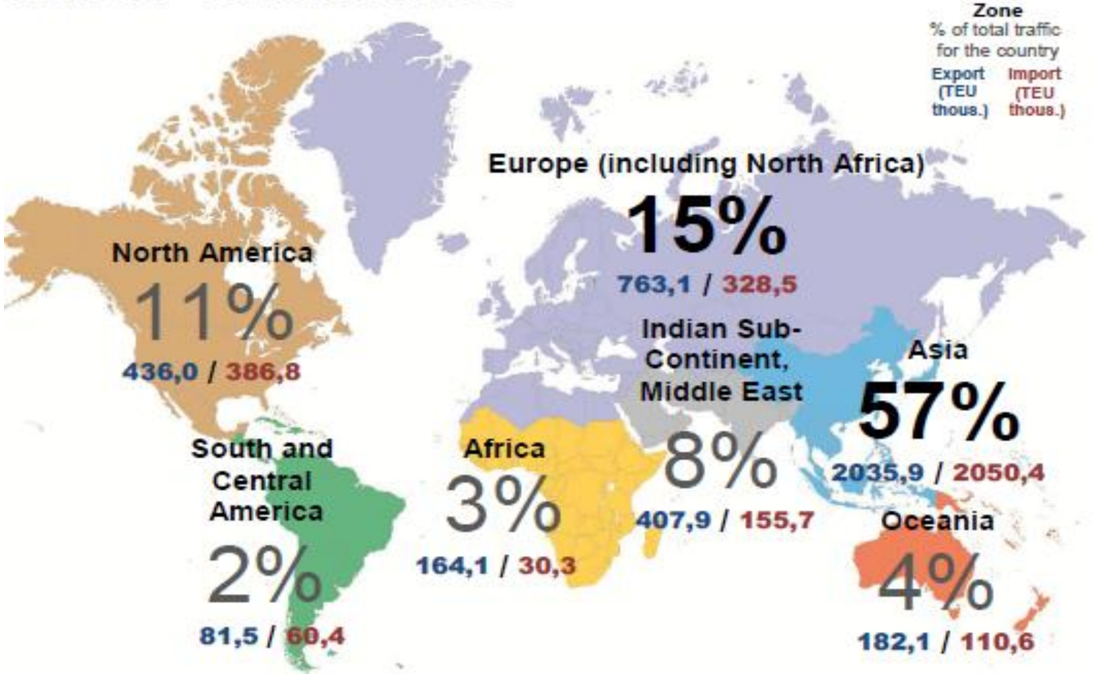
- Vietnam is forecast to be the fastest-growing convenience market in Asia by 2021, followed by the Philippines and Indonesia, according to new data released by international grocery research organization IGD.
- Asia’s grocery market is the largest in the world, with a predicted 6.3% compound annual growth rate up to 2021. Its size is forecast to reach US$4.8 trillion by 2021: equivalent to Europe’s and North America’s combined. In the convenience channel, IGD is forecasting high double-digit compound annual growth over the next four years in Vietnam (37.4%), the Philippines (24.2%) and Indonesia (15.8%), based on the performance of the leading convenience store operators in each market.

India, Indonesia and Thailand to outperform Asia in 2017

- When it comes to Asia's growth outlook, the south still reigns supreme. India, Indonesia and Thailand are seen as the region's best performers of 2017 thanks to healthy fundamentals.
- An external backdrop of tighter monetary policy in the United States—the Federal Reserve is expected to hike interest rates three times this year—and slowing global trade in anticipation of a protectionist stance from Washington also works in the favor of these three nations as recently noticed those last months.
- Export-dependent economies such as Korea, Taiwan, Singapore, and even China are unlikely to see a rebound this year.
- From shipping perspective we are looking at locally-driven economies like India and Indonesia, where debt levels are relatively low, there's positive credit impulse and strong domestic consumption.
- While the bank retains a cautious view on Asia's overall outlook, warning that regional growth will likely to slow at the margin in 2017 rather than accelerate, these three countries are still seen as a bright spot!!!

Indonesia under the spotlight

INDONESIA - Total market as at 2017



A DYNAMIC MARKET

Trades volumes and growth on focus year, exports and imports details

INDONESIA contributing to		Exports in 2017		Imports in 2017		Total market in 2017		
Trade		TEU thous.	Growth**	TEU thous.	Growth**	TEU thous.	Growth**	Logistics*
ZA	with ASIA	2 035,9	1,1%	2 050,4	0,7%	4 086,3	0,9%	EXC 1%
AE	with EUROPE	763,1	-0,8%	328,5	0,1%	1 091,6	-0,5%	DEF 57%
TP	with AMERICA, NORTH	436,0	1,0%	386,8	-3,1%	822,8	-1,0%	DEF 11%
AI	with INDIAN SUBCONT. & MIDDLE	407,9	3,2%	155,7	3,2%	563,6	3,2%	DEF 62%
OA	with OCEANIA	182,1	-1,1%	110,6	-0,9%	292,7	-1,0%	DEF 39%
AF	with AFRICA	164,1	2,3%	30,3	1,2%	194,4	2,1%	DEF 82%
AS	with AMERICA, SOUTH AND CENT	81,5	-1,1%	60,4	-1,9%	141,9	-1,4%	DEF 26%
WA	with AREAS NES	2,5	-1,5%	34,3	2,4%	36,7	2,1%	EXC 93%
Total contribution		4 073,0		3 157,0		7 230,0		

** Imbalance ratio: deficit (DEF) or excess (EXC) and range of imbalance (% of the gap out of the maximum)*
*** Growth of volumes, measured year-on-year in %*

Focus country: INDONESIA
Focus period: 2017
Source, unit: IHS GLOBAL INSIGHT, REPORTED IN TEU

CMA CGM meeting Indonesia challenge: a good example

CMA CGM

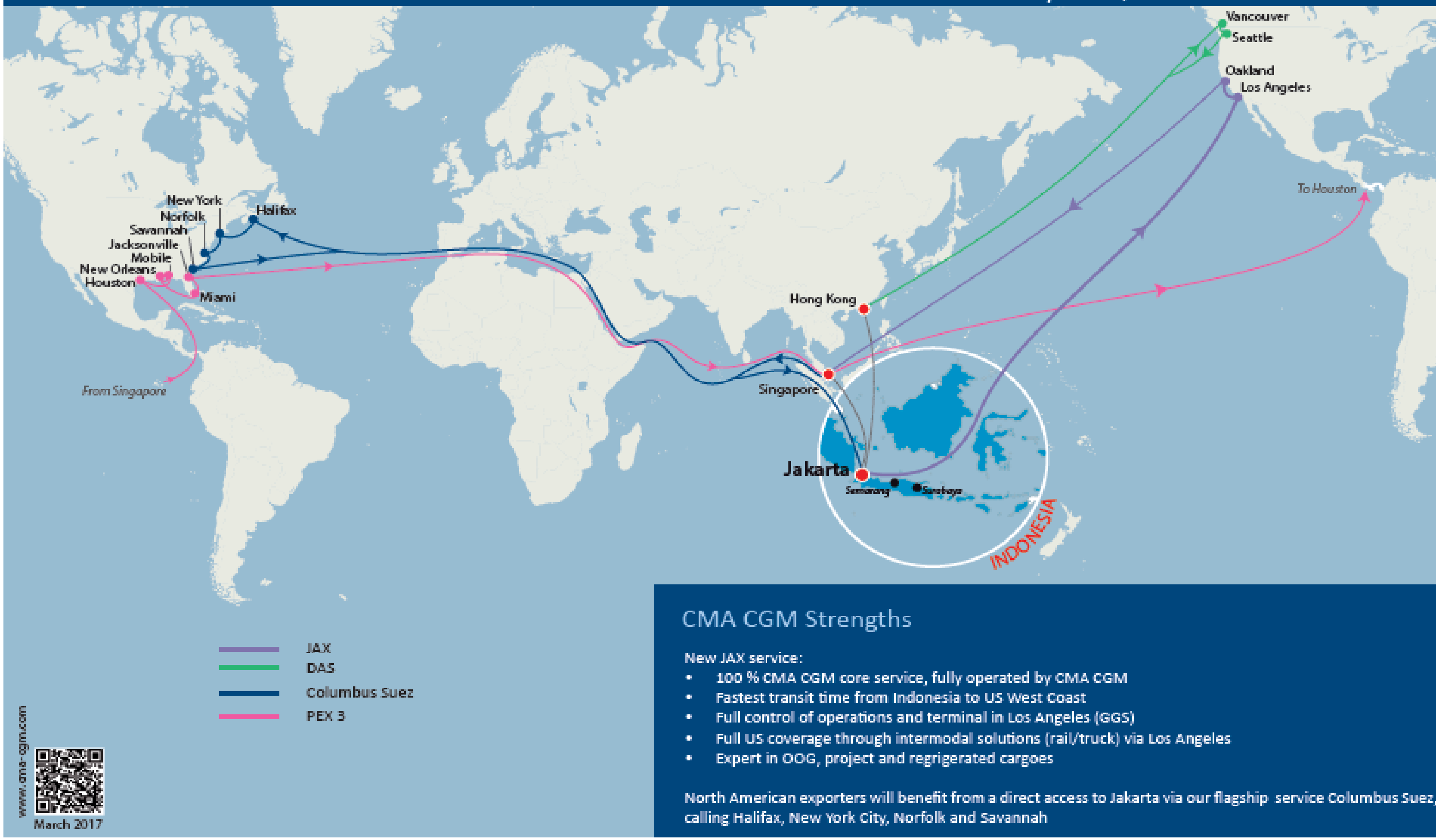
CMA CGM CONNECTS INDONESIA AND NORTH AMERICA

2017 East West Network

From April 1st, 2017 on

OCEAN ALLIANCE

POWERED BY CMA CGM



CMA CGM Strengths

New JAX service:

- 100 % CMA CGM core service, fully operated by CMA CGM
- Fastest transit time from Indonesia to US West Coast
- Full control of operations and terminal in Los Angeles (GGS)
- Full US coverage through intermodal solutions (rail/truck) via Los Angeles
- Expert in OOG, project and regrigerated cargoes

North American exporters will benefit from a direct access to Jakarta via our flagship service Columbus Suez, calling Halifax, New York City, Norfolk and Savannah

Top 25 busiest port in the world

Rank	Port	Economy	2015[1]	2014[2]	2013[3]	2012[4]	2011[5]	2010[6]
1	Shanghai	China	36,516	35,268	33,617	32,529	31,700	29,069
2	Singapore	Singapore	30,922	33,869	32,240	31,649	29,937	28,431
3	Shenzhen	China	24,142	23,798	23,280	22,940	22,570	22,510
4	Ningbo-Zhoushan	China	20,636	19,450	17,351	16,670	14,686	13,144
5	Hong Kong	Hong Kong	20,073	22,374	22,352	23,117	24,384	23,532
6	Busan	South Korea	19,469	18,423	17,690	17,046	16,185	14,157
7	Qingdao	China	17,323	16,624	15,520	14,503	13,020	12,012
8	Guangzhou	China	17,097	16,160	15,309	14,744	14,400	12,550
9	Jebel Ali (Dubai)	United Arab Emirates	15,585	14,750	13,641	13,270	13,000	11,600
10	Tianjin	China	13,881	14,050	13,010	12,300	11,500	10,080
11	Rotterdam	Netherlands	12,235	12,453	11,621	11,866	11,877	11,146
12	Port Klang	Malaysia	11,887	10,736	10,350	10,000	9,604	8,870
13	Kaohsiung	Taiwan	10,264	10,593	9,938	9,781	9,636	8,872
14	Antwerp	Belgium	9,654	9,136	8,578	8,635	8,664	8,468
15	Dalian	China	9,591	10,128	10,860	8,060	6,400	5,242
16	Xiamen	China	9,215	8,572	8,010	7,202	6,461	5,820
17	Hamburg	Germany	8,821	9,729	9,302	8,864	9,022	7,900
18	Tanjung Pelepas	Malaysia	8,797	7,897	7,628	7,700	7,500	6,530
19	Los Angeles	United States	8,160	8,340	7,869	8,078	7,941	7,832
20	Long Beach	United States	7,192	6,821	6,731	6,046	6,061	6,263
21	Laem Chabang	Thailand	6,780	6,518	6,032	5,830	5,731	5,068
22	Ho Chi Minh City (Saigon)	Vietnam	6,556	6,334	5,542	5,060	4,674	4,100
23	New York and New Jersey	United States	6,372	5,772	5,467	5,530	5,503	5,292
24	Bremen/Bremerhaven	Germany	5,547	5,796	5,831	6,115	5,915	4,871
25	Jeddah	Saudi Arabia	5,417	4,200	4,561	4,738	4,010	3,830

Shipping alliances affecting hub ports map

The alliance reshuffle will no doubt have an impact on ports. The port of Singapore is set to benefit the most but at the expense of other Asian ports. Of the 29 Asia-Europe services provided by all three groupings, the port of Singapore will attract 34 weekly calls. That's up from the current 29 calls from 27 services. This is thanks to CMA CGM's acquisition of APL, which prompted the French carrier to embark on a joint venture with PSA-Singapore for operating its CMA CGM-PSA Lion Terminal.

This, however, comes at the expense of neighboring Port Kelang, which will have its number of weekly calls reduced from eleven to five, and rival Hong Kong port.

Hong Kong will be the biggest loser of the rationalization, with only seven weekly calls of northern European loops and three weekly calls of Mediterranean loops, replacing 10 and five calls respectively,"

For THE Alliance, Singapore holds the honor of being its only Southeast Asian hub. Malaysia's Tanjung Pelepas remains as 2M's key hub in the area.

On the receiving end, Rotterdam Port will continue to serve as the key port on the European side. Rival Hamburg Port will lose one weekly service from the Ocean Alliance.

The prospect of the three alliances ultimately choosing three primary transshipment hubs could mean significant upheaval to the port landscape in a region such as Asia, where currently at least seven or eight ports rely heavily on alliance transshipment traffic.
Some hubs, such as Malaysia's Port Klang, are already starting to lose out.

What's next after transshipment redistribution?

- By reducing the number of transshipment, the costs can be reduced from three or two to one.
- Trend indeed once dust settles over the new alliance networks, the next phase for the carriers will be one of optimizing these networks with an eye to minimizing the large costs involved in the combination of vessels costs, fuel costs, terminal costs, transshipment costs, and equipment repositioning costs
- Fewer hubs also create the possibility for better yield management with the possibility to even out volatile cargo flows from regional ports by gathering cargo at a centralized exit point. This in turn secures consistently higher vessel utilization for the deep-sea trades beyond the region.

SOLUTION

- Development of partnership through JV, joint operations with carriers is the long term solution.
- Focus in regionalization
- Cost is a key, but efficiency is primary

Focus in regionalization versus globalization

- **Strong tendency from carrier to focus on regionalization where growth is there, and in line with the region to region or intra region, or domestic economies.**

- New set up such as SEAGO line from MAERSK, INTRA MED LINES from CMA CGM, or the acquisition of OPDR by CMA CGM clearly confirm a strong trend to go for short sea. Recent success story of MCC in Philippines is a good example as well.

- **Asia being a good example of intra region full of potential:**

- 60% of the south east Asian volumes are purely intra Asian.

- Intra Asia market very dynamic, extremely depressive with very low rates, but still recording 5 to 10% growth amongst the south east Asian countries.

- The development on the intra asia market assist shipping lines to balance the deficit logistic countries and reposition their empty containers at lower costs

- Still some countries signatories of the ASEA pact, do not have a direct shipping link. ASEAN regulation should as well follow this trend to support the short sea dynamic.

- **Other developments such as RORO services, barge routes and domestic lines could contribute to improve the environmental footprint as long as the regulation change and evolve too…**

Indonesia Domestic market: a good example

3 M Teus
15% growth YoY
→40% Jakarta
→60% Surabaya

OPPORTUNITIES

- ❑ Archipelago country → 17 000 islands
- ❑ Domestic market has been stable in last couple of years / more stable than International
- ❑ Continuous demand on consumer goods among inter Indonesia islands
- ❑ Support from government to fulfil local market demand from Nal products
- ❑ Strong door to door footprint in the domestic sector with CFS, trucking
- ❑ Market needs more alternative carrier option
- ❑ Enable to support international export/import business, particularly to niche market area (non-based port)
- ❑ As the alternative option for equipment supply to deficit area

262 M. inhabitants

- ❑ Yearly growth rate 2016 is 1.17%
- ❑ About 56.7% of Indonesia's population lives on Java, the most populous island
- ❑ Indonesia population is equivalent to 3.51% of the total world population
- → 4th rank in the world
- ❑ 54.7 % of the population is urban

CMA CGM

IAPH BALI 2017

CONCLUSION

FIRST AND ABOVE ALL, COME AND INVEST IN INDONESIA!

- The shipping industry is redesigning itself;
- Fewer carriers, fewer alliances, most probably further consolidation;
- But at the same time limited growth in comparison with the last decade;
- **The era of giant ships is over** for the time being!

Regionalization will strengthen Versus globalization – time to market being a competitive advantage and a key buying factor.

Digitalization will change the industry drastically – this will be a challenge as well as and a huge opportunity.

How shipping lines & ports can assist, support each other to meet those challenges?

Thank You

EFFICIENCY IS DOING THINGS RIGHT; EFFECTIVENESS IS DOING THE RIGHT THINGS

PETER DRUCKER