

BIGGER, WIDER, HEAVIER, MORE EXPENSIVE

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BMLA

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IF I WERE A SHIP....

THIS WOULD MAKE ME MORE EFFICIENT.....

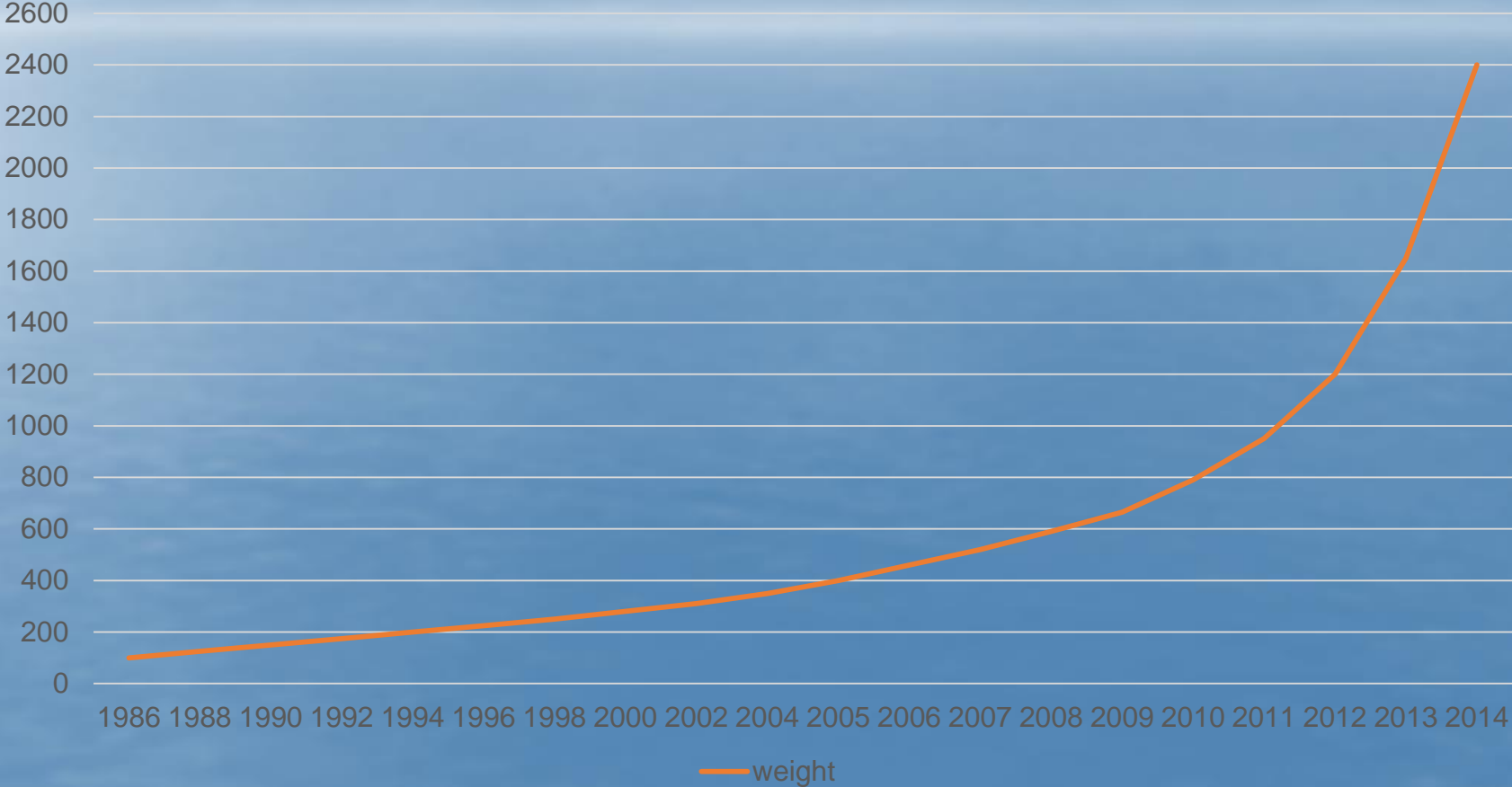




1981

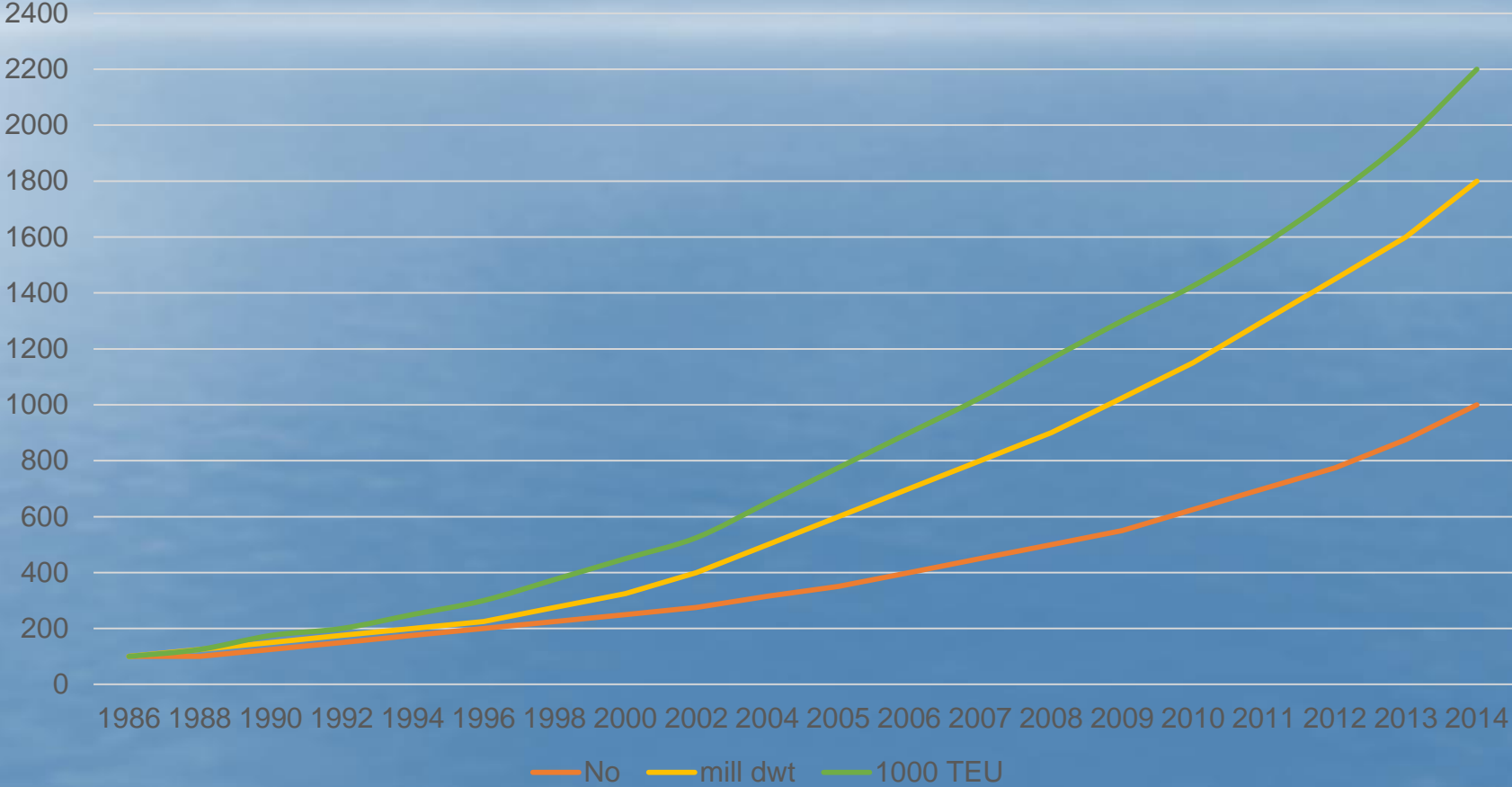
TOWNSEND WEIGHT DEVELOPMENT

As of January 1st, 1986 – 2014 (index 1986 = 100)

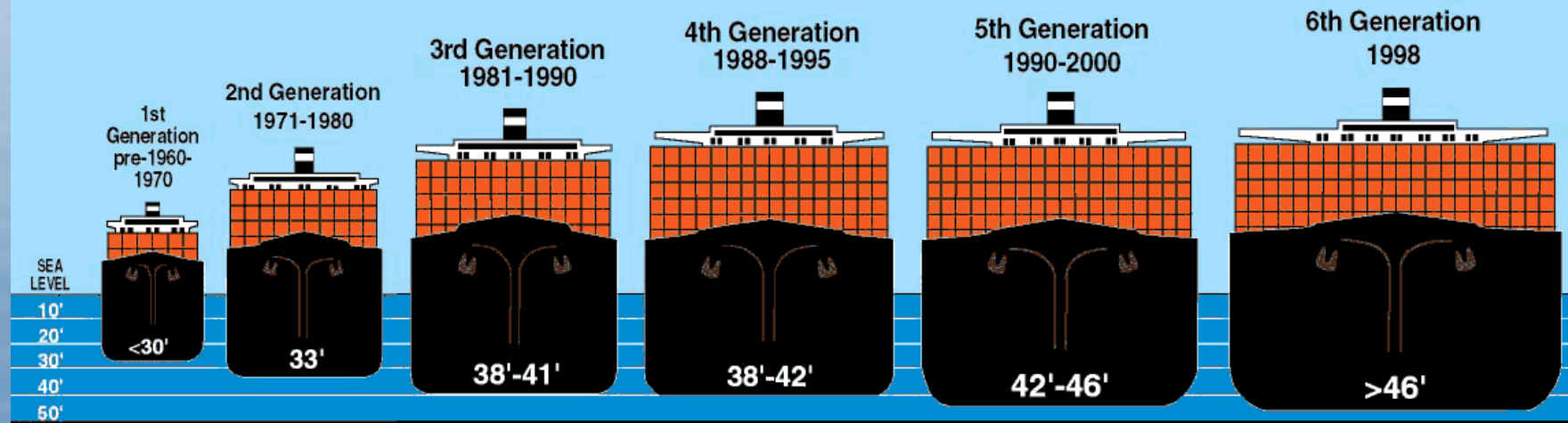


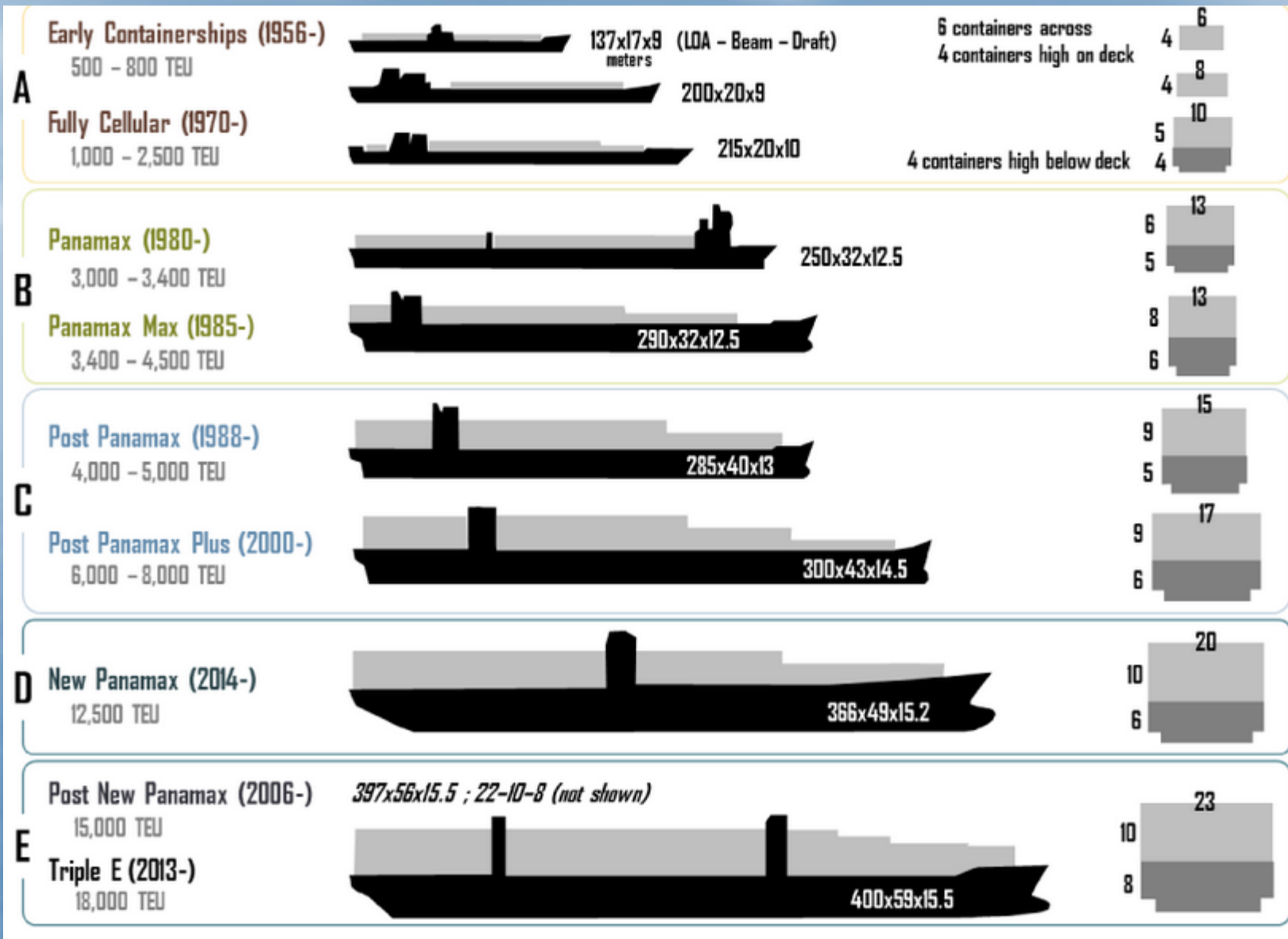
CONTAINER FLEET DEVELOPMENT

As of January 1st, 1986 – 2014 (index 1986 = 100)

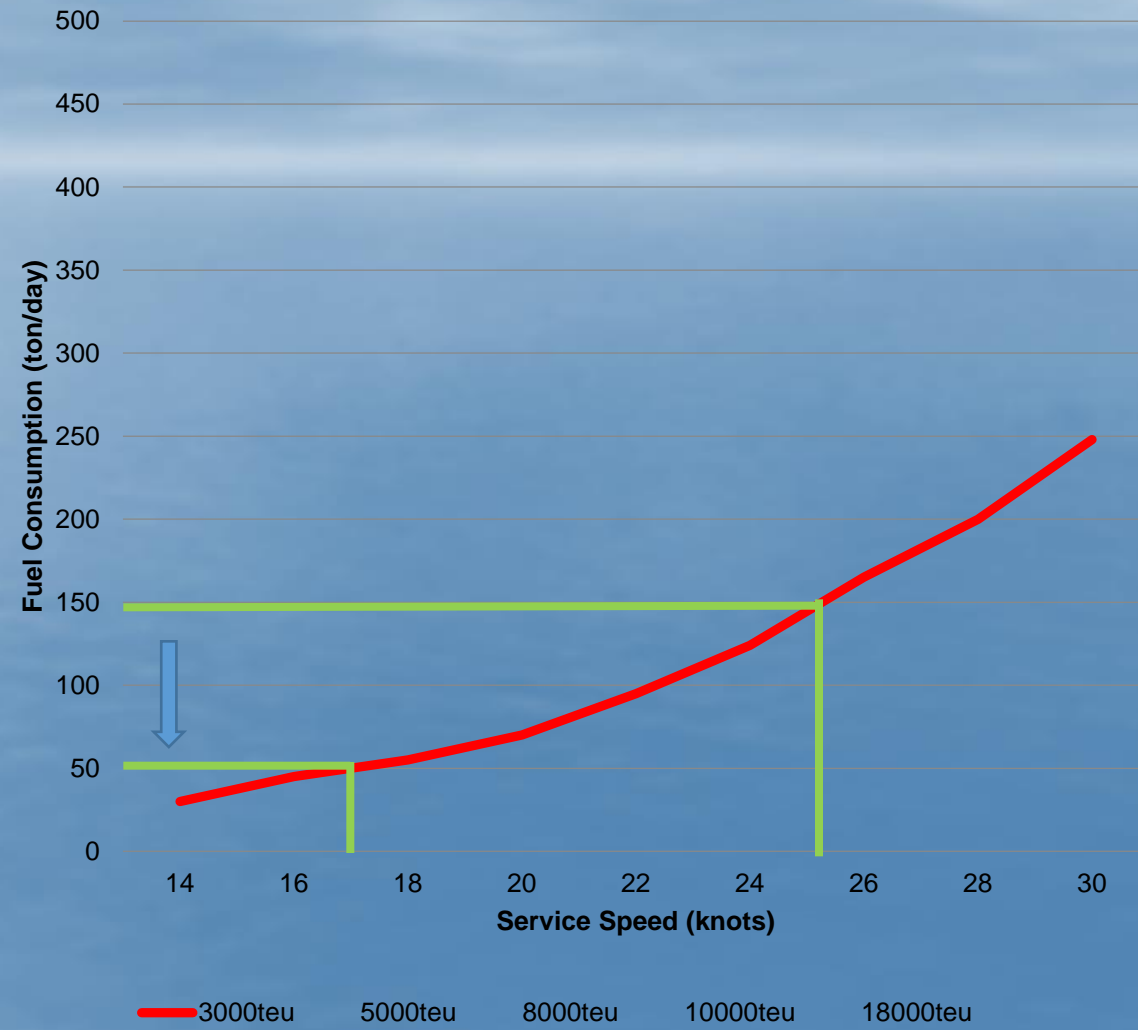


Evolution of Container Ships

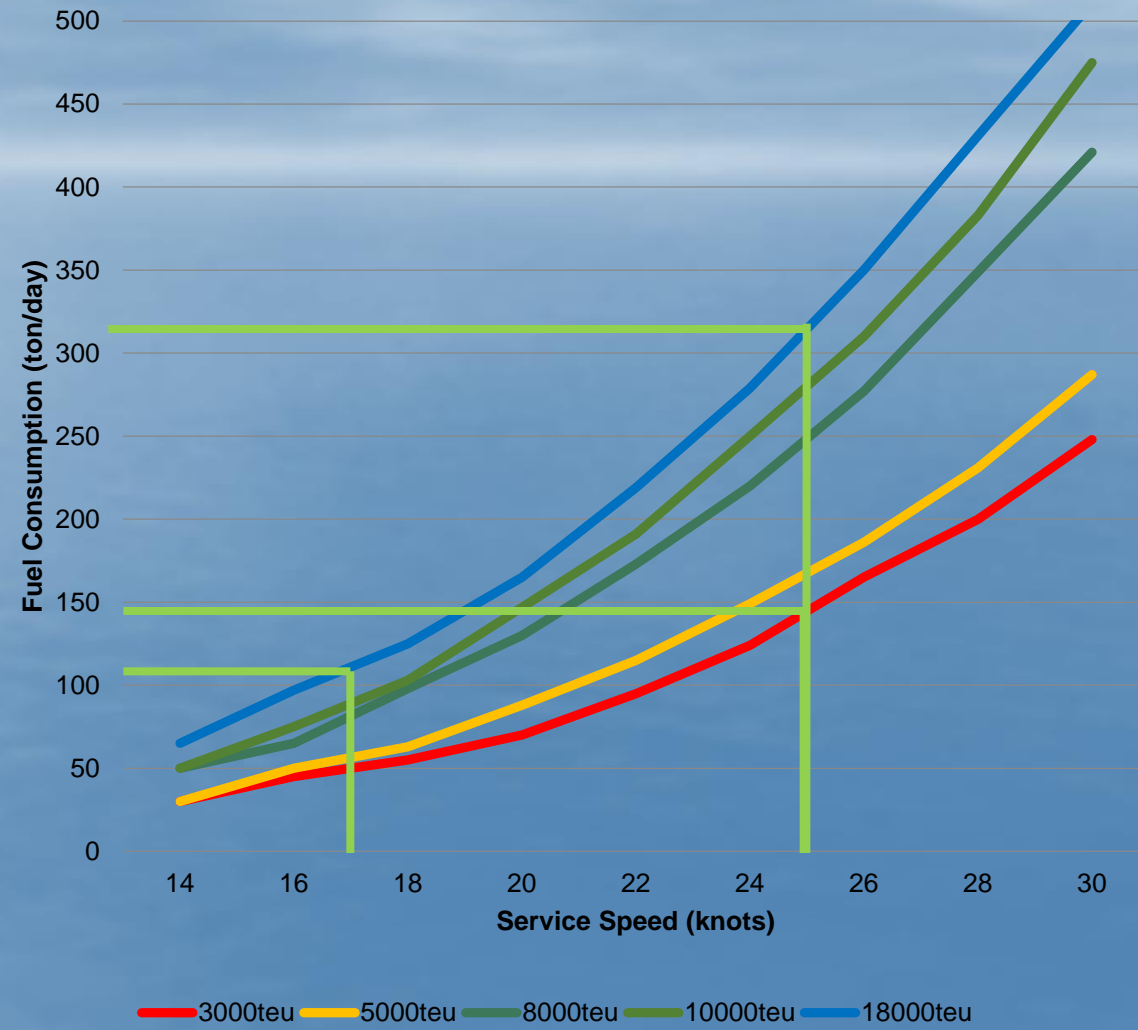




FUEL CONSUMPTION TONS PER DAY



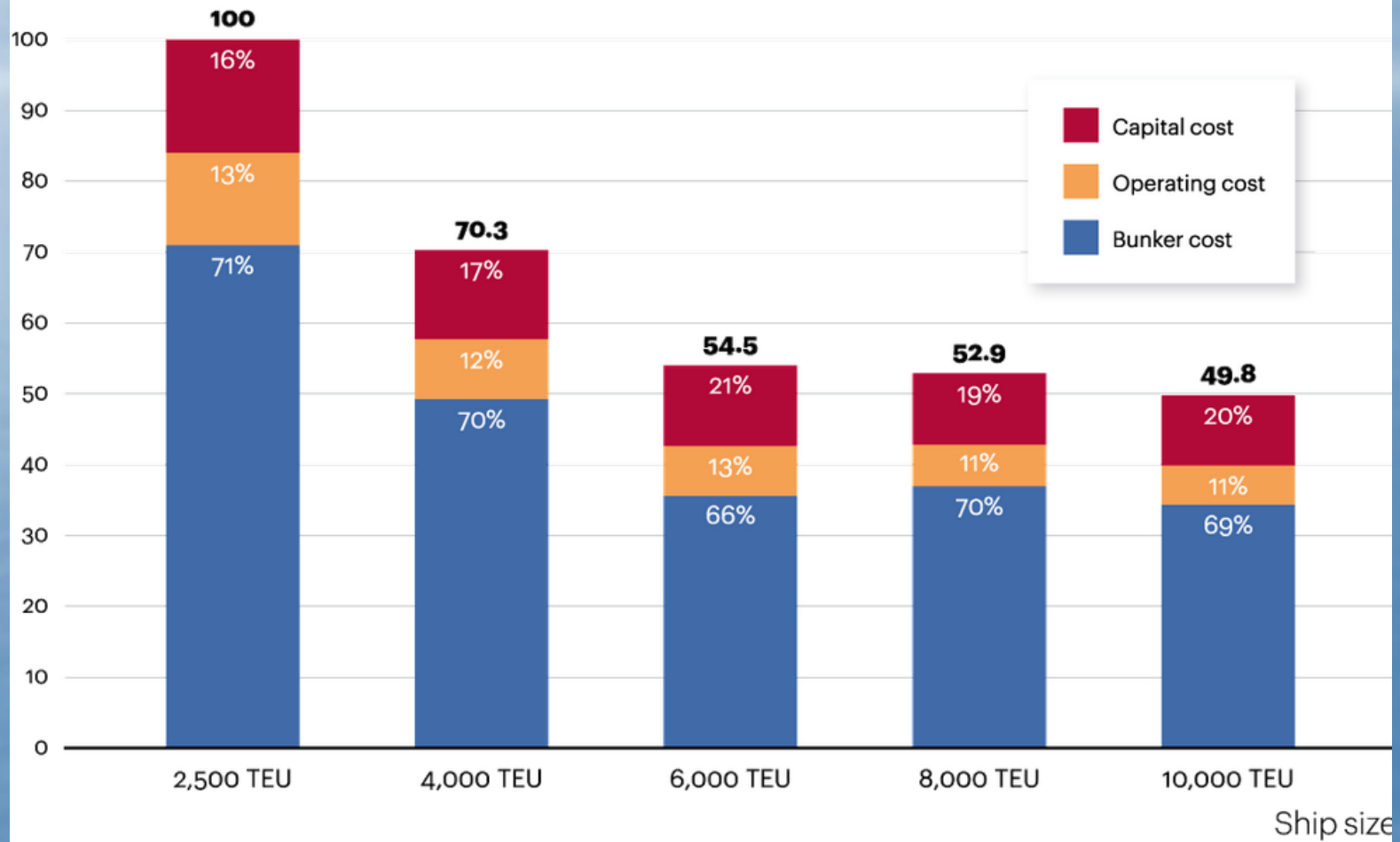
FUEL CONSUMPTION TONS PER DAY



Bigger ships result in lower costs in many categories

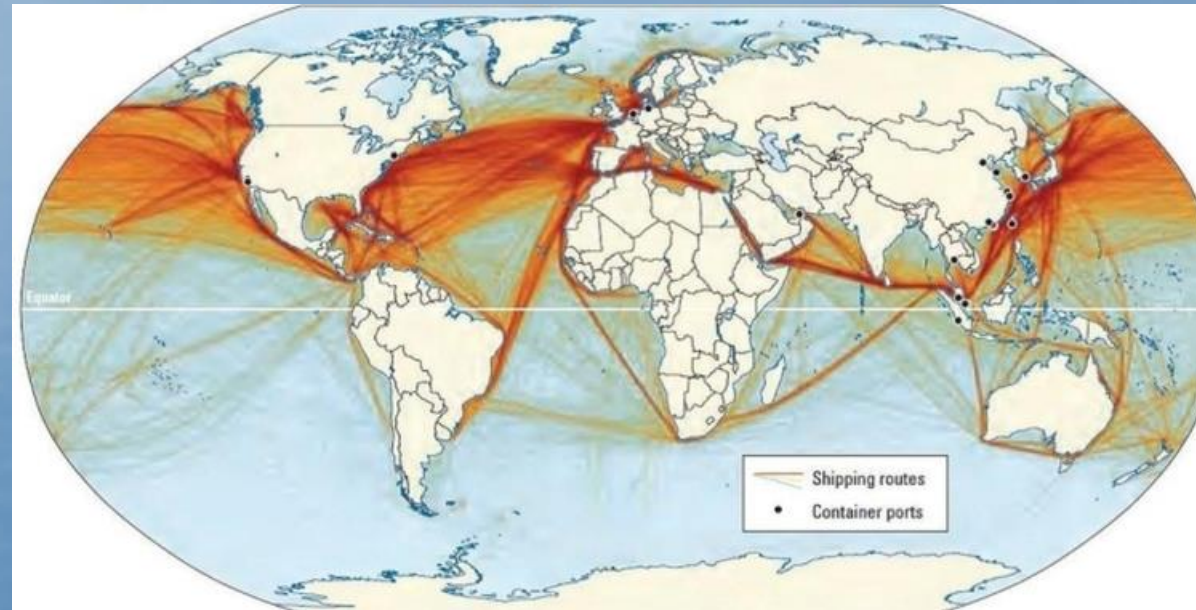
Indexed costs

(2,500 TEU = 100)



Sources: Drewry reports, interviews with shipping executives

MEGA CONTAINERSHIPS

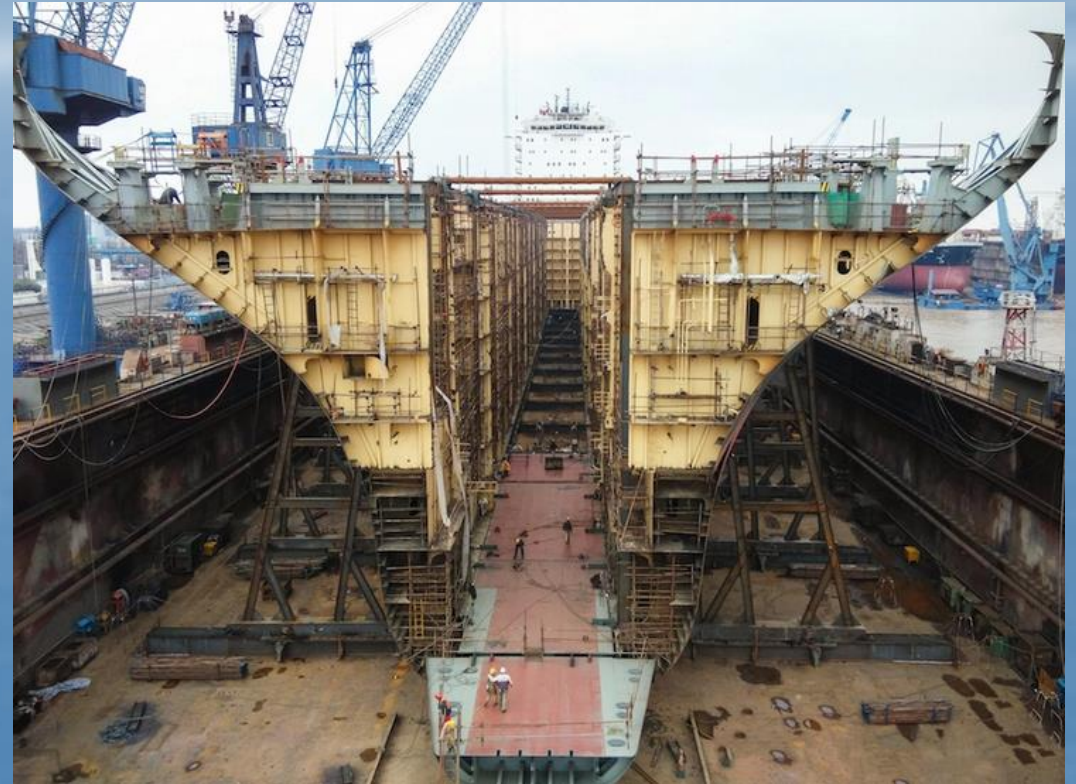


PANAMA CANAL PROPOSED FEES

- Calculations show that the average fee per box drops by \$10 from the smallest to the largest ship based on a vessel utilisation of 70%
- Average cost:
 - 5,000 teu ship = \$116 per box
 - 6,000 to 8,999 teu ship = \$111 per box
 - 9,000 teu and above = \$106 per box
- Existing charge for 70% utilised ship stands at \$114 per box

PANAMAX WIDENING

- Capacity increased 30% from 4,800 to 6,300
- The technical inefficiencies of panamax vessels were also likely to lead to “beamier” ships.
- Panamax vessels carry a lot of ballast water because they are of very narrow construction to fit through the present canal and need extra stability. Wider ships need less ballast water, which means lower fuel consumption.



MEGA CONTAINERSHIPS

- "There is twice as much tonnage afloat today as there was in 2001 but there are only 25% more hulls, and its in containerships where this expansion in scale is most acute". Tom Boardley Marine Director LR
- "There were no ultra-large post panamax containerships (of 12,000 teu or larger) until 2007; now there's more than 2m teu capacity in that category alone)"
- A new containership > 10,000 teu is launched on average every 8 days.
- US West Coast now sees 13,000 teu
- New Panamax
- Average size exceeded 11,300 teu at end 2013
- Since 2012 ship sizes have grown more steeply on South American routes than on Asia – Europe as a result of the cascading. 9,000 teu common on both coasts of South America

CSCL GLOBE (19,100 TEU)



MSC OSCAR (19,224 TEU NOTIONAL)



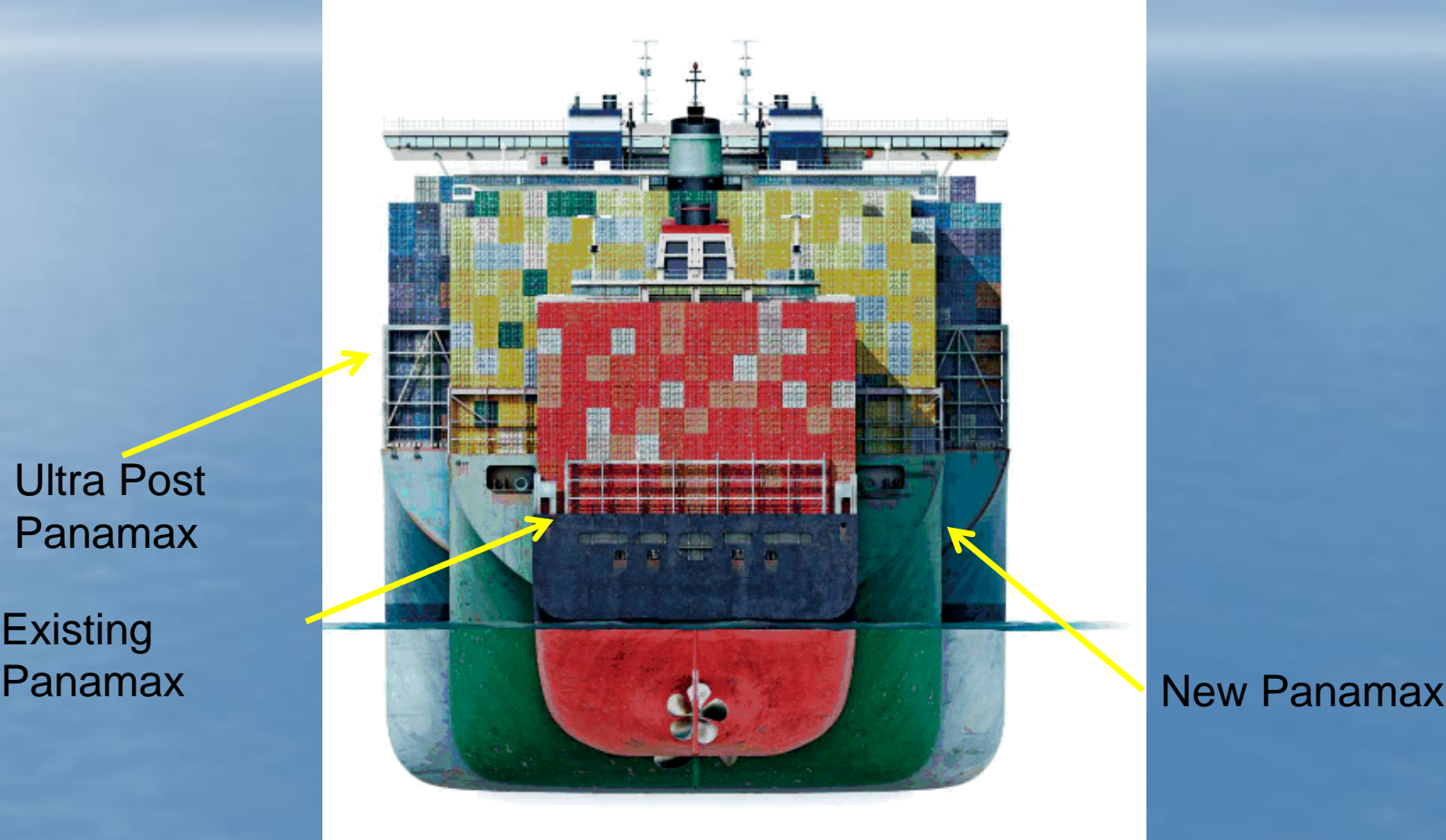
EVER BIGGER? (DNVGL MARITIME CEO TOR SVENSEN)

- 19,000 teu => 20,500 teu requires an increase in one principal dimension
 - Widen 1 row,
 - Or by lifting the deckhouse to ensure visibility, 11 tiers on the hatchcovers and 11 tiers in the hold
- 20,500 teu => 22,500
 - Add one 40 bay and widen 1 row in the 20,500 class
 - 12 tiers in the hold
- 22,500 teu => 24,000 teu would require new structural layout.
 - DNV/GL 1 hold longer, 2 rows wider and 1 hold higher.
 - Likely to be 12 tiers above deck and 12 tiers in the hold

THE RACE TO 20,000 TEU

- Evergreen and Mitsui OSK now vying to order first 20,000 teu
- Evergreen up to 11 units
- MOL up to 6 units

EMMA MAERSK V EEE



THE LIMITERS...

- Marginal gains in economies of scale
- Also infrastructure restrictions:
 - eg Suez (restrictions are leading to a permissible draught of only 15m for a 65m beam)
 - Current port restrictions of Ship to Shore cranes
 - Height constraints could apply in ports such as Hong Kong, Hamburg or Osaka that have bridges

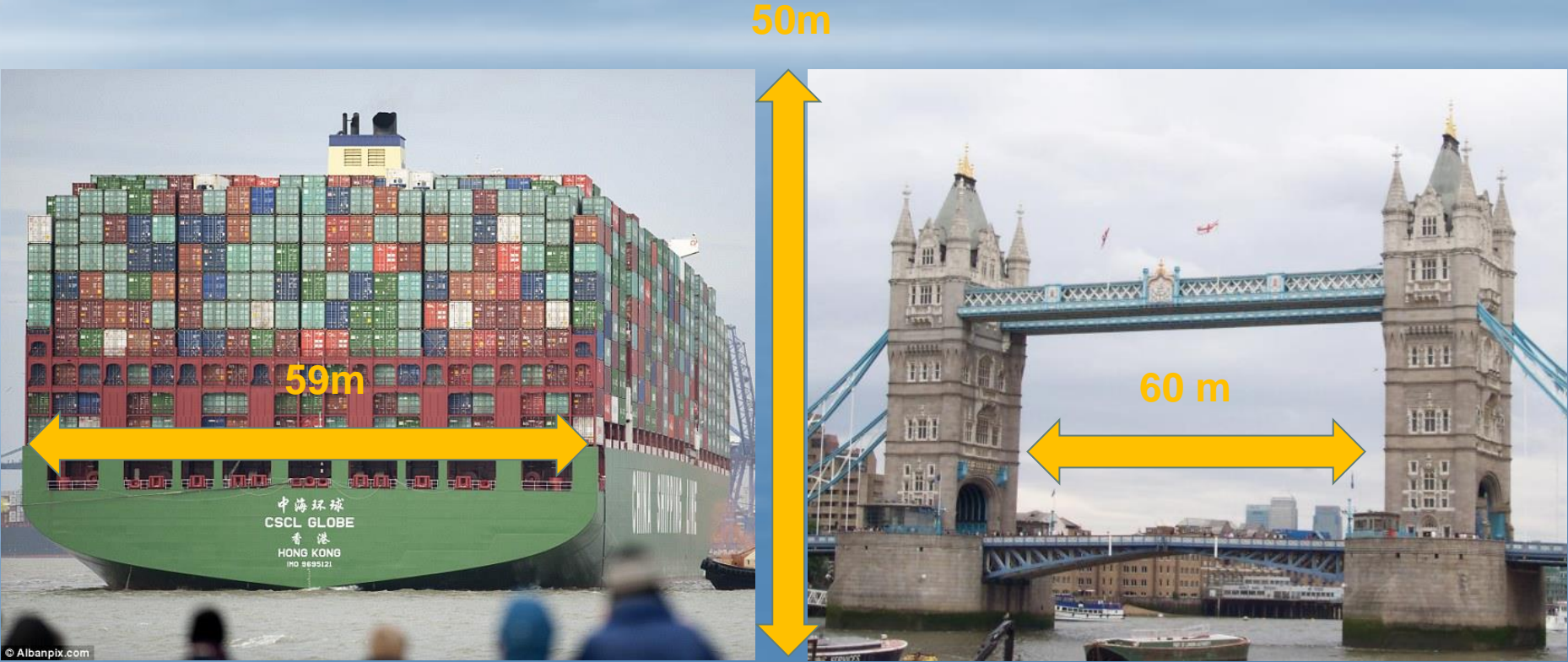
How big.....?

FOR THE GOLFERS HERE.....

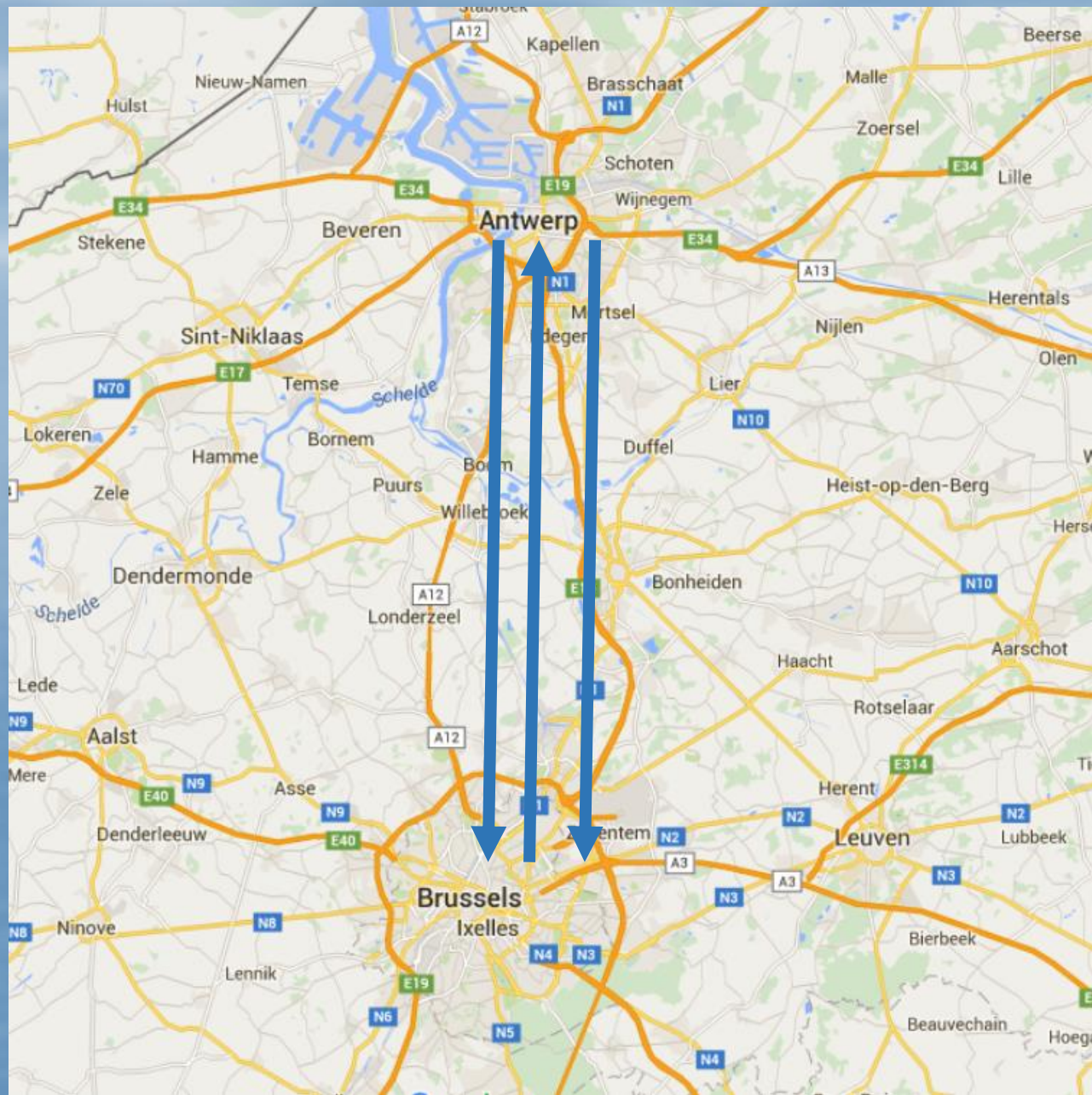




CSCL GLOBE V TOWER BRIDGE







Problem?

What problem?







APL Panama (Ensenada - Christmas Day 2005)



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- Grounded Dec 25th 2005 - Refloated March 10th 2006
- Almost no damage
- 1805 containers on board - Approx. 1,300 discharged
- 1,445 cargo interests - Approx. 1,600 adjuster man hours

COMPARISONS

APL Panama

DWT 52,250
TEU across 13
TEU 4,038
(TEU 1,805 on board)
1,445 cargo interests
1,600 adjuster man hours

Not completely adjusted 5 year later

USD 68 million GA

Ultra Post Panamax

DWT 190,000
TEU across 26
TEU 19,200
(say 75% laden – 14,400 o/board)
11,520 cargo interests ????
12,755 adjuster man hours????
Nearly 7 man years to adjust !!

Help!!!!!!

USD ???,000,000

LOF AWARDS (SOURCE - LLOYDS.COM)

Year	New cases	Ship	Cargo	Other	Total	% Award/values
2001	108	\$50.9	\$107.6	\$2.5	\$161.0	16.7
2002	104	\$81.5	\$173.3	\$6.6	\$264.4	14.2
2003	89	\$72.8	\$94.0	\$2.3	\$169.1	14.7
2004	91	\$47.1	\$93.9	\$3.9	\$144.9	9.9
2005	109	\$64.5	\$119.8	\$1.3	\$181.6	7.8
2006	80	\$53.7	\$31.6	\$0.5	\$85.8	13.6
2007	107	\$172.6	\$210.6	\$9.5	\$392.7	14.8
2008	83	\$203.8	\$92.0	\$3.6	\$299.4	7.1
2009	122	\$161.2	\$401.0	\$8.9	\$571.1	20.4
2010	111	\$26.9	\$37.7	\$1.3	\$65.9	14.4

REALISTIC DISASTER SCENARIO (COURTESY OF ROGERS WILKIN AHERN)

- Assumptions:
 - 19,200 teu capacity containership, fully laden
 - (say 16,000 containers on board)
 - Average container value \$30,000
 - Cargo value - \$480,000,000
 - Ships sound value assessed at \$200,000,000
 - Lloyds' Open Form Salvage awards 15-20%

REALISTIC DISASTER SCENARIO (COURTESY OF ROGERS WILKIN AHERN)

- Overall venture value \$700,000,000 +/-
- **LOF 15% = \$100,000,000 (+ interest and costs)**
- With Additional GA sacrifice and expenditure a total of **\$175,000,000** or more could be anticipated
 - Plus hull PA?
 - Plus cargo PA?
 - Removal of wreck?

BUT IT WILL NEVER HAPPEN.....

- CMA CGM Libra grounded Port of Xiamen 18th May 2011
- UASC Al Rawdah grounded Batu Berhanti, Indonesia 19th June 2011
- MSC Luciana grounded leaving Antwerp 19th Sept 2011
- Rena off Astrolobe reef 5th October 2011

MSC LUCIANA ENGINE TROUBLE AND GROUNDED LEAVING ANTWERP



19th Sept 2011

- Bareli Grounded off Fuqing, China 15th March 2012
- Buenos Aires Express – fire off Brazil 28th February 2012
- MSC Idil - explosion on board 11th May 2012
- MSC Flaminia – explosion on board 14th July 2012
- Amsterdam Bridge– explosion 8th September 2012

MSC FLAMINIA – EXPLOSION ON BOARD



14th July 2012

MSC FLAMINIA – FIRE/EXPLOSION MID ATLANTIC

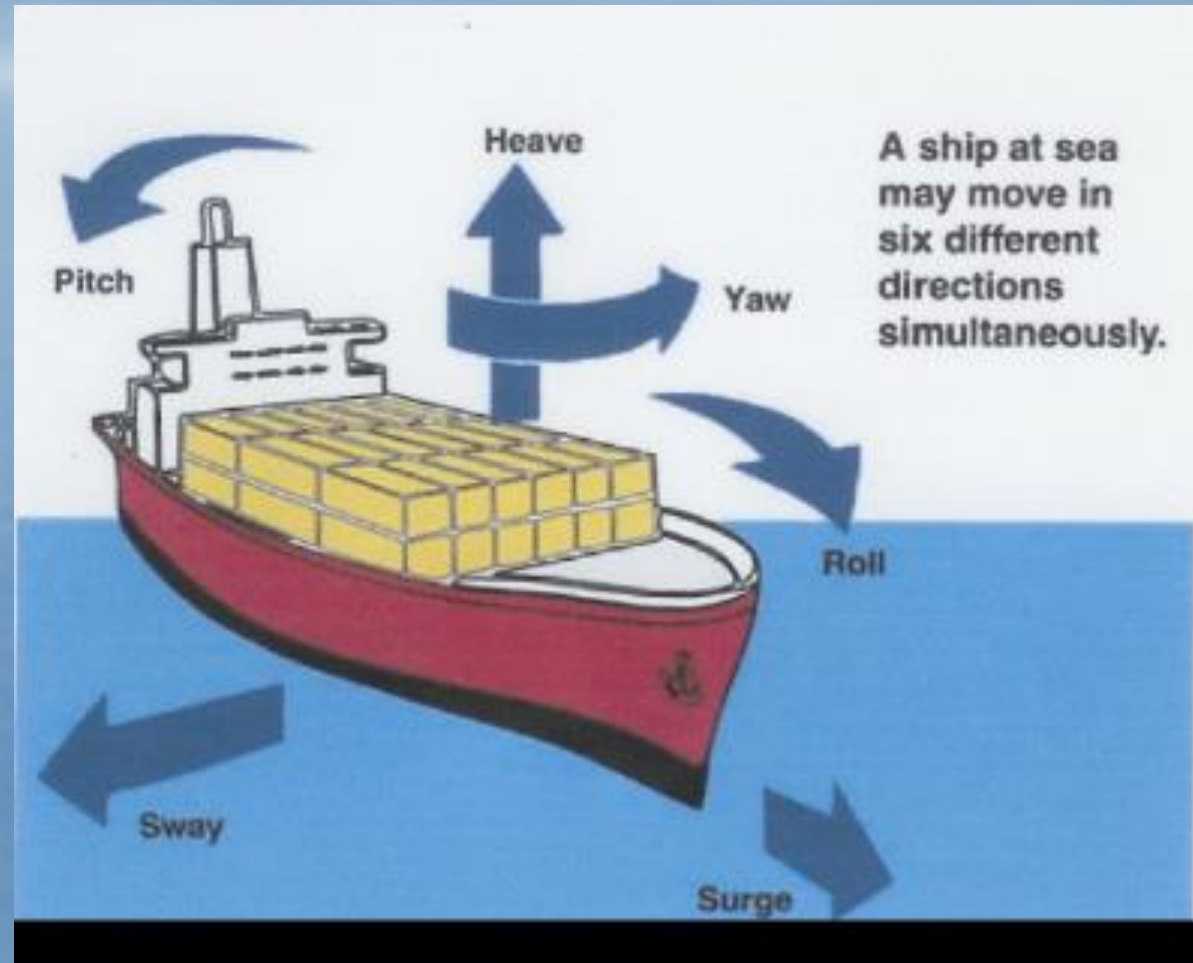
- 2001 Built
- 85,823 dwt
- 6,750 teu capacity
- 2,876 containers on board

- Explosion
- Estimated 70% of cargo destroyed
- GA declared

IF THE GUARANTEE DEMAND IS TOO HIGH.....



HEADSEA PARAMETRIC ROLLING PHENOMENON



PROVIDED BY
LiveLeak



MOL EXCELLENCE 2003 4646 TEU



- Rolling up to 20 degrees
- Pitching up to 7 degrees
- Waves up to 6 metres
- Swell up to 7 metres

MOL COMFORT 17TH JUNE 2013



MOL COMFORT – 17TH JUNE 2013

- 2008 built 8,110 teu
- 4,372 boxes on board (7,104 teu)
- Ruptured midships
- Stern section sank after drifting for 10 days
- Fore section sank 8 days later after fire

WHAT DOES THIS MEAN TO UNDERWRITERS?

- Fewer claims
- More “bigger/small” claims
- LOF
 - Purpose built equipment?
 - Incentive for salvors to invest?
 - Rena
- General Average nightmare

LANDMARK CONSORTIUM

- Shipowner assumes cargoes proportion to GA/salvage guarantees
- Only in respect of container ships
- Notional value per container, \$30,000
- Limit \$500,000,000 (being 16,666 teu x \$30,000)
- 1 guarantee for cargo interests
- Enables immediate release of undamaged containers at safe port
- Consolidated and uninsured containers covered

WHY WOULD CARRIER WANT TO BUY?

- Never call GA or demand guarantees from Freight forwarder, consignee or consignor
- Very small surcharge per container

STAKEHOLDERS

Stakeholder	Rationale	Vote
Shipowners	<ul style="list-style-type: none"> • Reduced administration costs • Speedier resolution • Great selling point for clients with no detention • No longer have to organize and collect counter guarantee 	++
Salvors	<ul style="list-style-type: none"> • No longer have to collect guarantees from each cargo party • Quicker resolution time 	+++
Uninsured cargoes	<ul style="list-style-type: none"> • No longer have to provide security for each GA/Salvage guarantees 	++
Adjusters	<ul style="list-style-type: none"> • Adjusters are spared the time-consuming collection and calculations for thousands of interests and can concentrate on the higher level work of determining the adjusting principles and quantum involved in the casualty. 	+++
Insurers	<ul style="list-style-type: none"> • Simplified product • Less costs to adjust 	++

CHANGE.....

- Change is inevitable.....
 - Except from a vending machine!

