

Global Maritime Trends

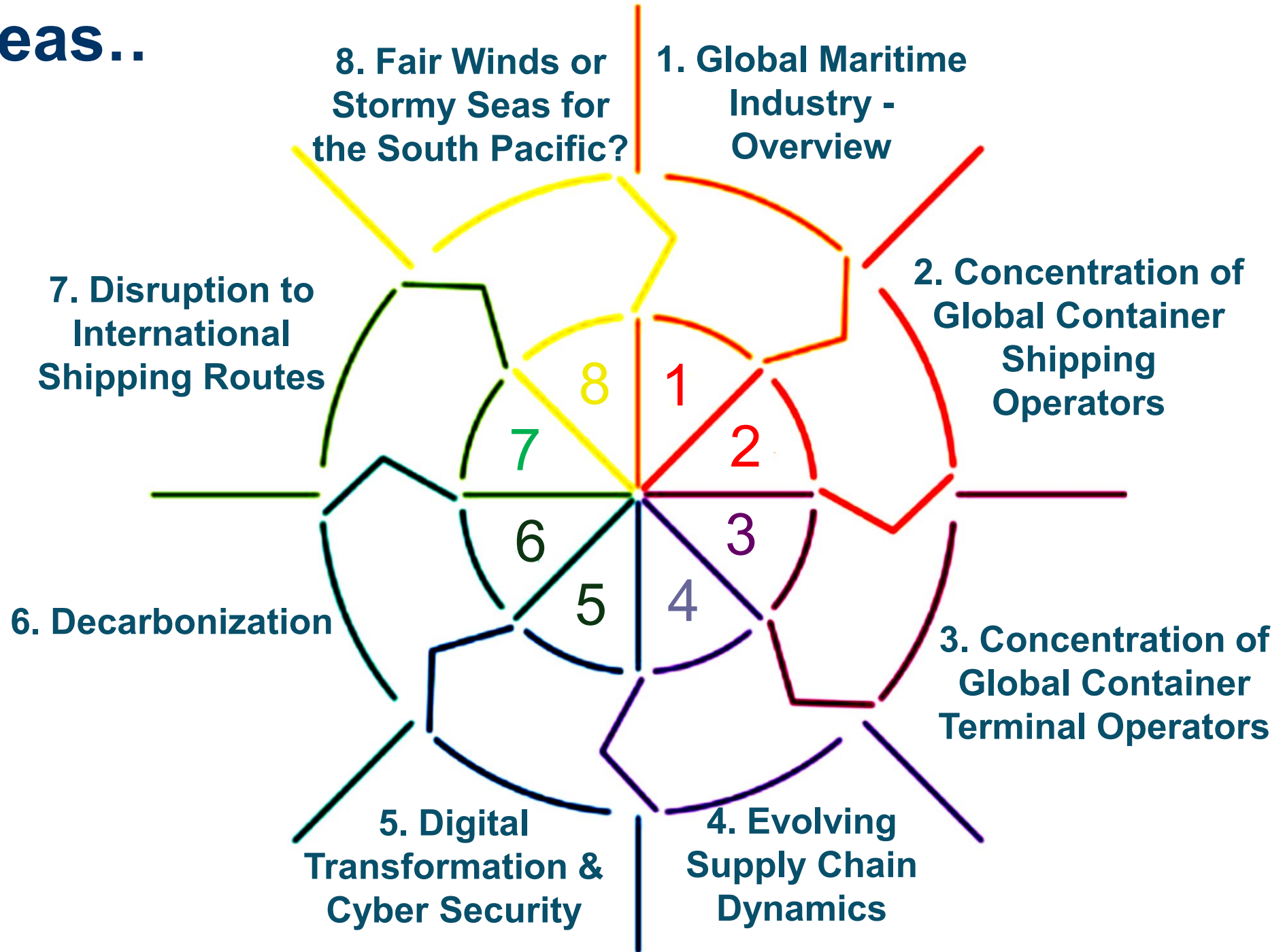
Dr. Parakrama Dissanayake
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& their Implications

Aitken Spence



Key Focus Areas..



1. Global Maritime Industry - Overview

- ✓ Handles over 90% of world trade, carrying ~ 12 billion tons annually

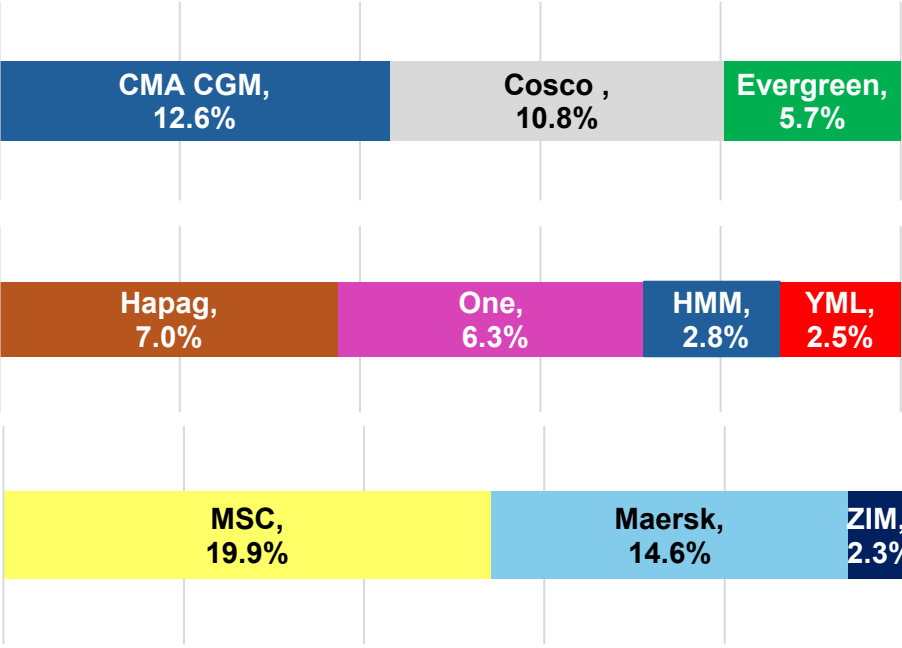
(UNCTAD, Review of Maritime Transport 2023)

- ✓ 56,000+ ships with a capacity of >1,000 grt
- ✓ ~ 2 million sea farers on board these ships
- ✓ ~ 20 million direct & indirect workers who interface with or support the maritime industry
- ✓ ~ 7,000 active container vessels
- ✓ Total global container vessel capacity of ~ 30 million TEUs.
 - ~ 84% held by top 10 shipping lines
 - ~ 7% held by next 10 shipping lines
- ✓ Total global container vessel order book of ~ 7 million TEU's
 - ~ 85% for top 10 shipping lines
 - ~ 5% for the next 10 shipping lines



2. Concentration of Global Container Ship Operators

Alliance	Members	Details	Capacity of Alliance as % of Global Capacity
Ocean Alliance	CMA-CGM COSCO Evergreen	Formed in 2017. Recently extended till 2032.	29.1%
THE Alliance	Hapag Lloyd HMM ONE, YML	Launched in 2017, Hapag Lloyd will be leaving in Jan 2025	18.6%
2M	MSC Maersk ZIM	Formed in 2015. Will come to an end in Jan 2025	36.8%
Gemini	Hapag Lloyd Maersk	To be launched in Feb 2025	~ 22.0%



Total Global Capacity held by the three alliances : 84.5%

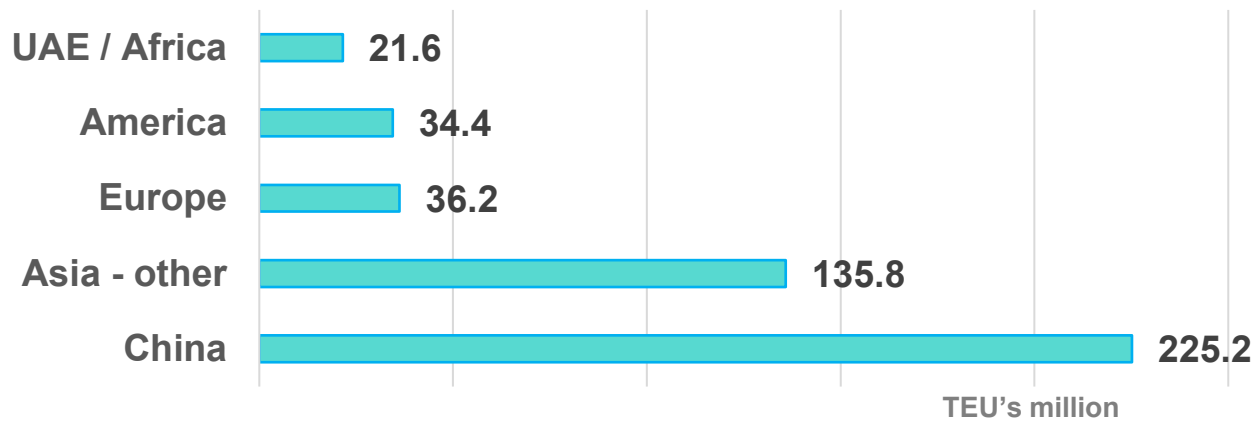
based on Alphaliner's Top 100 Operator ranking of 8th June 2024



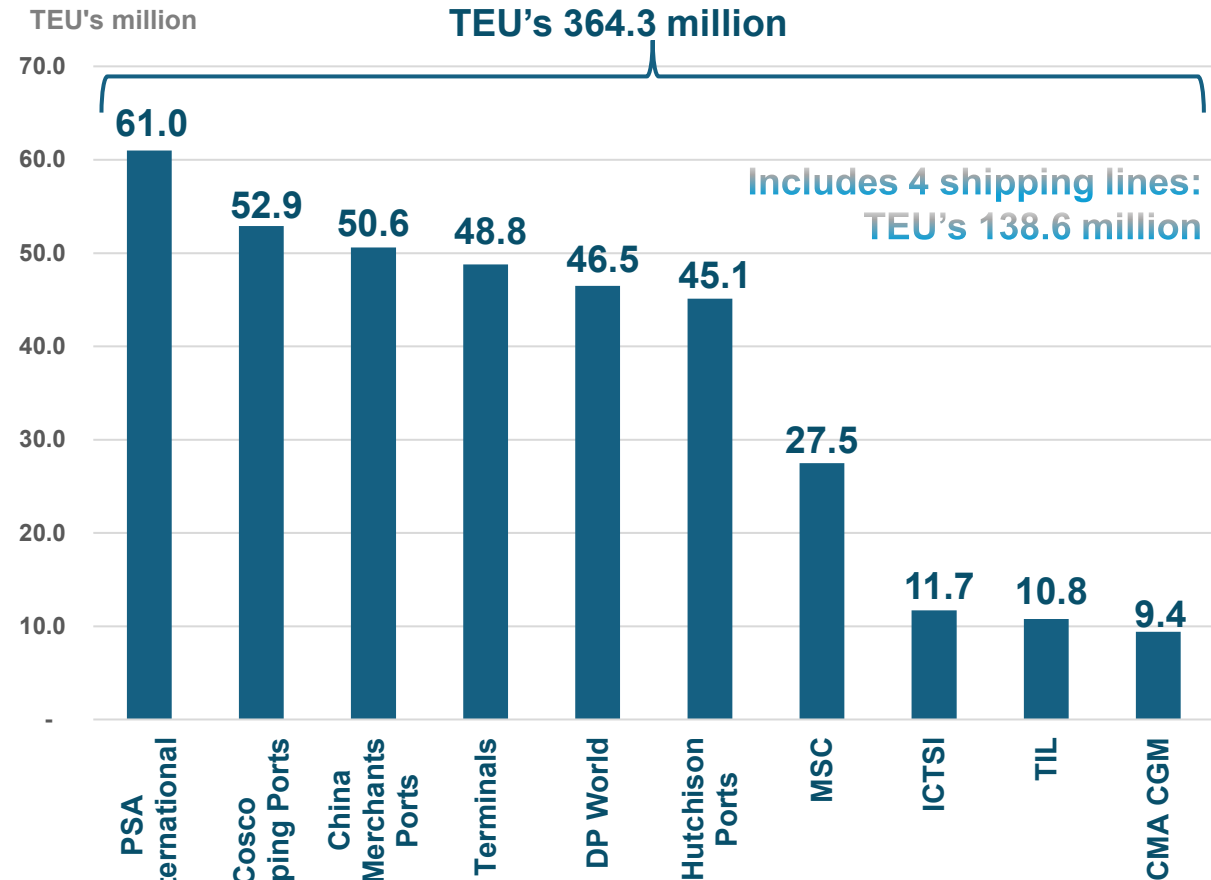
3. Concentration of Global Container Terminal Operators

- Total global port volume of 866 million TEU's.
- Top 10 port global terminal operators handled 364.3 million TEU's ; 42% of global volumes.
- **80%** of global container port volumes handled by **20 major global terminal operators.**
- Top 30 Ports account for 52% of global TEU's

Geographical Location of Top 30 Ports



Top 10 Global Terminal Operators - 2022



4. Evolving Supply Chain Dynamics

- ↗ Outsourcing manufacture from West to Asia significantly enhanced global trade.
- ↗ Post-pandemic, US-China tensions has seen the increase near-shoring, re-shoring trend.
- ↗ Kearney’s 11th annual Reshoring report states that reshoring and nearshoring activity has increased in 2023.

↗ This is determined by the Manufacture Import Ratio (MIR index), calculated as;

$$\frac{\text{Import of manufactured goods from 14 Asian low-cost countries/regions}}{\text{US domestic manufacturing gross output}}$$

MIR Index	
2021	14.49
2022	14.10
2023	12.14

Down by (14%)

↗ Deloitte ‘Future of Freight’ report predicts reshoring will cut U.S. Asian imports 40% by 2030.

↗ US companies reshored nearly 350,000 jobs in 2022, and nearly 240,000 in 2021.



4. Evolving Supply Chain Dynamics

US - China Trade			
In USD Billions			
Year	Exports	Imports	Trade Balance
2022	154	536	-382
2023	148	427	-279
YoY Decline	-4%	-20%	-27%

Source: <https://www.census.gov/foreign-trade/balance>

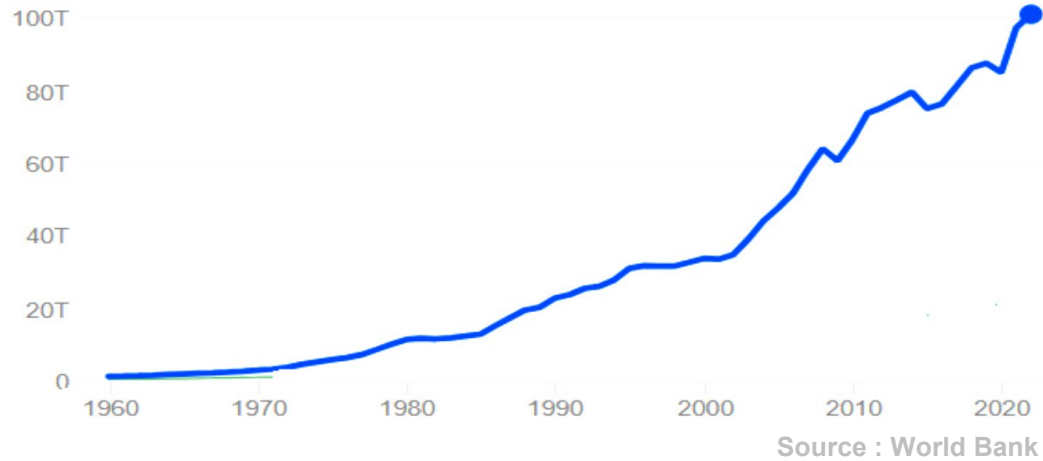
Europe - China Trade			
In Euro Billions			
Year	Exports	Imports	Trade Balance
2022	231	627	-396
2023	224	514	-290
YoY Decline	-3%	-18%	-27%

Source: Eurostat (online data code: ext_st_eu27_2020sitc)

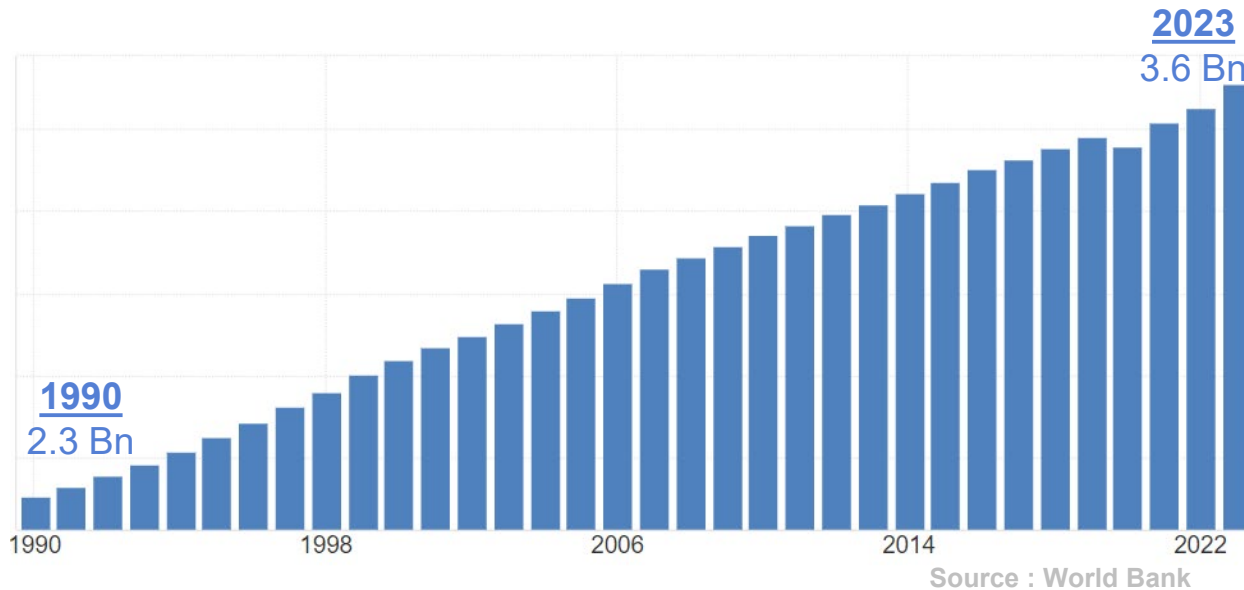


4. Evolving Supply Chain Dynamics

101.3 trillion USD (2022)



- 1980: World GDP USD 11.5 trillion; 2022: USD 101.3 trillion.
- Liberalization of economies in '70s/'80s boosted world trade.
- The global labor force grew from 2.3 billion in 1990 to 3.6 billion in 2023, facilitated also by the expansion in trade.
- A shift towards protectionism may significantly affect world trade direction.
- Protectionism can trigger trade wars, harming global trade and relations.



- ➔ Is Protectionism raising its ugly head again..?
- ➔ Will it not diminish an equitable job creation..?
- ➔ Will it not increase the disparity in world poverty..?

Protectionism should not be led by nationalistic policies;

but only if there is a significant beneficial impact on the country and global well-being

As per the Multidimensional Poverty Index of 2023 (by UNDP & OPHI);

Half of world poor are from Sub-Saharan Africa;
Over one third are in South Asia



5. Digital Transformation & Cyber Security in the Maritime Industry

✓ **Data Analytics & AI**

Enable predictive maintenance of vessel and equipment, enhance vessel and fuel efficiencies and the early pick up of changing weather patterns and re-routing mechanisms

✓ **Blockchain Technology**

Secure and transparent ledger for cargo tracking and enhanced supply chain visibility and security

✓ **Internet of Things (IoT)**

IoT with cloud computing enable real time collection & processing of data leading to efficient operations

✓ **Real Time Tracking of Cargo Conditions**

Sensory detection of condition of cargo carried on the vessel and determine optimal storage conditions



5. Digital Transformation & Cyber Security in the Maritime Industry

☑ Remote Pilotage and Surveys

The uptick witnessed in remote pilotage and surveys during the pandemic has shifted the attitude had for more technology driven solutions

☑ Autonomous Ships

Advances in AI and robotics have made it possible to design vessels capable of self-navigating and making decisions independently

☑ Automated Ports

Technologies including robotics container handlers, automated cranes, intelligent conveyer systems. As of 2021 there are 50+ automated container terminals globally



5. Digital Transformation & Cyber Security in the Maritime Industry

- A McKinsey study : Most business supply chains are **less than 50%** digitized.
- A strict focus on technology changes alone, such as robotic process automation (RPA), AI and smart data capture can **reduce costs by up to 20%**.
- AI-enabled supply chain management helps early adopters reduce logistics costs by **15%** and improve service levels by over **50%**.

Key barriers for digitization remain;

- ➡ Human capital limitations
- ➡ Investor commitment



5. Digital Transformation & Cyber Security in the Maritime Industry

Digitization and connectivity growth in maritime has made strong cybersecurity crucial.

- ❑ **Maersk Attack**: hit by a ransomware attack costing it an estimated USD 300 million in 2017.
- ❑ **Port of Houston**: a breach in the global maritime transportation system Dec 2021.
- ❑ **Burnswick Corporation**: a cyberattack in Jun 2023 with an impact of USD 85 million.
- ❑ **Simulated Attack** : In a simulated cyber attack conducted in a maritime security lab at the University of Plymouth, an email malware was forwarded to a container ship. In just 2.5 minutes the vessel drifted off course and ran aground. Estimated impact on world trade USD 1.6 billion.



5. Digital Transformation & Cyber Security in the Maritime Industry

Prerequisites for cyber security;

- ✓ Robust cyber security strategy
- ✓ Secure network infrastructure
- ✓ Training and awareness
- ✓ Up-to-date firewalls, intrusion detection systems, encryptions and multi-factor authentication
- ✓ Back up and recovery policies and mechanisms
- ✓ Compliance with regulatory authorities



6. Decarbonization

➤ The **2023 IMO Strategy on Reduction of GHG Emissions** from Ships was adopted in July 2023.

➤ This strategy provides indicative checkpoints to reach net-zero GHG emissions from international shipping, namely:

- ✔ Reduce annual GHG emissions from international shipping by at least 20%, striving for 30%, by 2030, compared to 2008
- ✔ Reduce annual GHG emissions from international shipping by at least 70%, striving for 80%, by 2040, compared to 2008
- ✔ Goal of net zero emissions by 2050



6. Decarbonization

➤ Methanol dual-fuel ships account for over 80% of all new orders in second half of 2023 and beginning of 2024.

➤ Cost construction of dual fuel ships are higher by approximately 10% - 20% than conventional engines.

➤ Industry is looking at alternative fuels such as LNG, hydrogen, bio-fuel etc.

➤ Key green port strategies include,

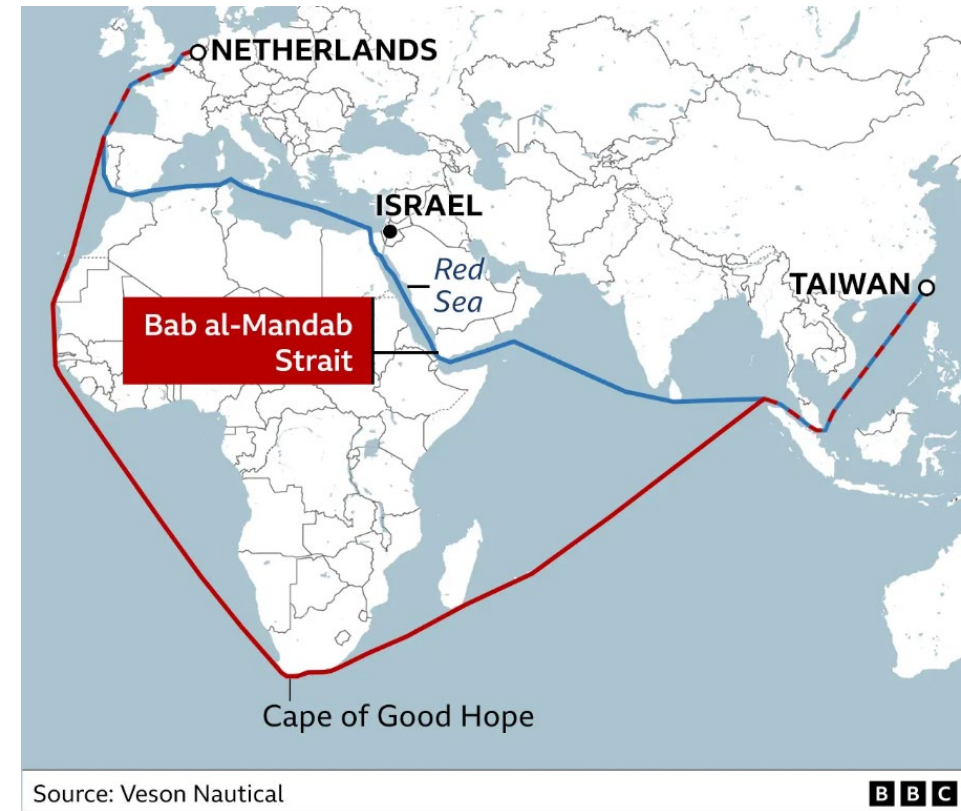
- Green ports certification
- Emergency environment protection & disaster preparedness
- Compliance with international & national legislation
- Compliance with ISO standards on waste management
- Marine water quality management
- Light and noise pollution management
- Port operational efficiency enhancement
- Renewable energy sources
- Energy Efficiencies



7. Disruption to International Shipping Routes

Red Sea blockade

- ⦿ Prior to the Gaza conflict ~ 50 vessels on average traversed the Suez canal per day
- ⦿ ~ 80% decline in dry bulk carriers going through Suez canal in June 2024, compared to June 2023
- ⦿ The alternate Cape of Good Hope route adds 6,000 km, 10-15 more days, and a cost \$1 million+ per voyage
- ⦿ War risk premiums for Suez canal routes rose from 0.07% in October 2023 to as high as 2.0% in recent days



7. Disruption to International Shipping Routes

Panama Canal Restrictions

- Normal transit through the Panama Canal ~ 34 to 36 ships per day.
- Restricted to ~ 24 ships per day during the drought.
- Negative impact on supply chain efficiency resulting from;
 - Wait time for ships increasing from hours to weeks
 - Port congestion
 - Reduced vessel cargo capacity
 - Additional surcharges for clients moving goods through the canal
- A ship going through the locks of the Panama canal use ~ 55 million gallons of fresh water. The drinking water for half of the Panamanian population also comes from the same artificial lakes that run the locks.



8. Fair Winds or Stormy Seas Ahead for the South Pacific?

↪ **Concept of near-shoring and re-shoring..**

! Opportunity or Threat ?

↪ **Concentration of shipping alliances & global terminal operators...**

! Requirement for a paradigm shift for greater cooperation & collaboration?

↪ **Congestion in large ports...**

*! Is it not creating an opportunity for ports in the South Pacific?
Are we ready with the required infrastructure and facilities?*

↪ **Development of new technologies..**

*! Need to adapt and change ; are we willing to invest in latest technology?
Are port personnel and ship crews ready to adapt?*

↪ **Geo-political tensions and its spill over on world trade..**

! Impact to the region?



“The maritime world is a testament to human collaboration, where different flags unite under the banner of trade and connection; woven together with threads of trade, culture and cooperation.”

Unknown author



Vinaka | *Thank you*

