



# The International Maritime Transport and Logistics Conference

## “MARLOG 12”

**Sustainable & Innovative  
Technologies**

Towards a Resilient Future

12 - 14 March, 2023 Alexandria - EGYPT



Format shape  
with your  
own pic

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**RESILIENCE STRATEGIES AND  
THEIR ROLES IN ENHANCING  
COMPETITIVENESS IN THE  
MARITIME TRANSPORT**

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## EXTERNAL ENVIRONMENT DISASTERS



### 2019-2020 – Pandemic

- Lockdowns
- Decrease of international trade / transportation
- Ports closure
- Crew issues



### 2021 – Post Covid-19

- Restocking of global market
- Inflation pressure

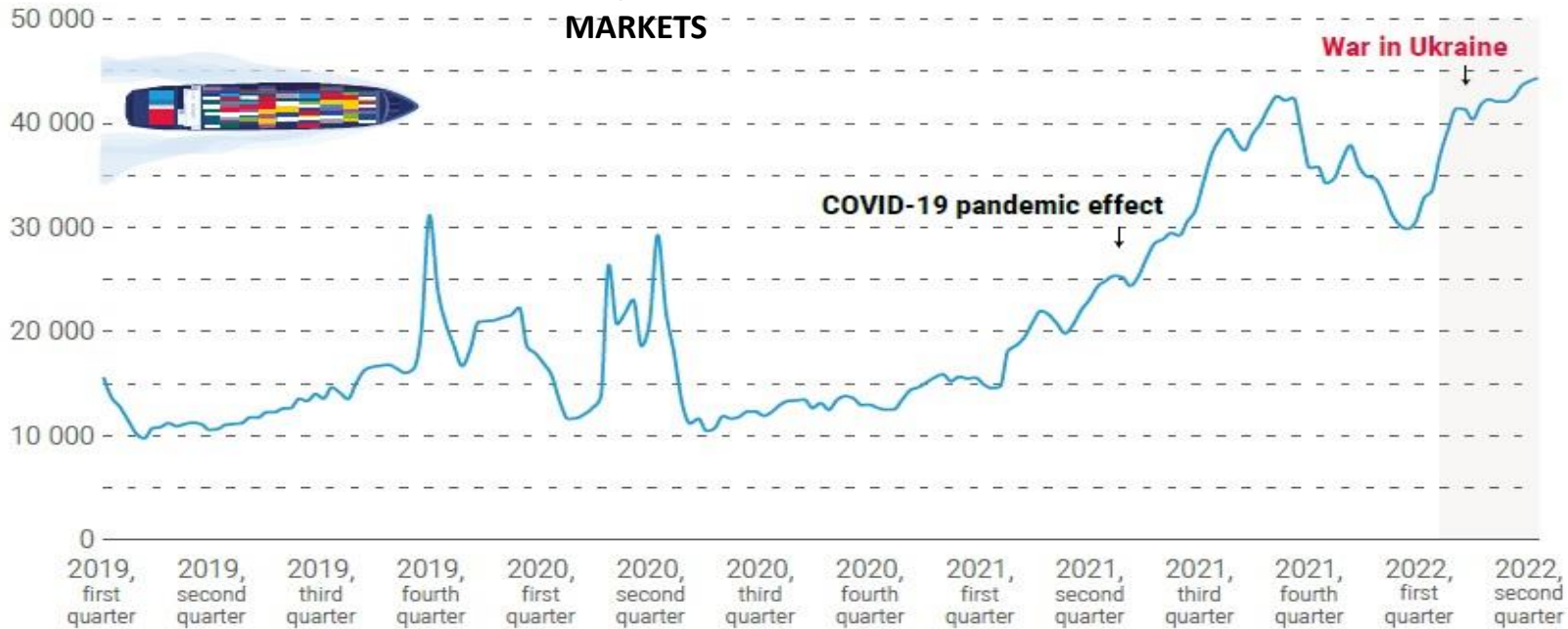


### 2022 – War in Ukraine

- Energy supply shortages / EU Sanctions
- Ton-miles increase / alternative trade routes
- Demand increase

# MARITIME COST 2019-2022

CLARKSEA INDEX IN \$/DAY FOR ALL SHIPPING MARKETS



Source: UNCTAD, 2022

- High insurance costs
- High fuel prices
- Port congestion
- Emissions regulations

## RESILIENCE STRATEGIES AND COMPETITIVENESS OF SHIPPING COMPANIES



### Definition of resilience:

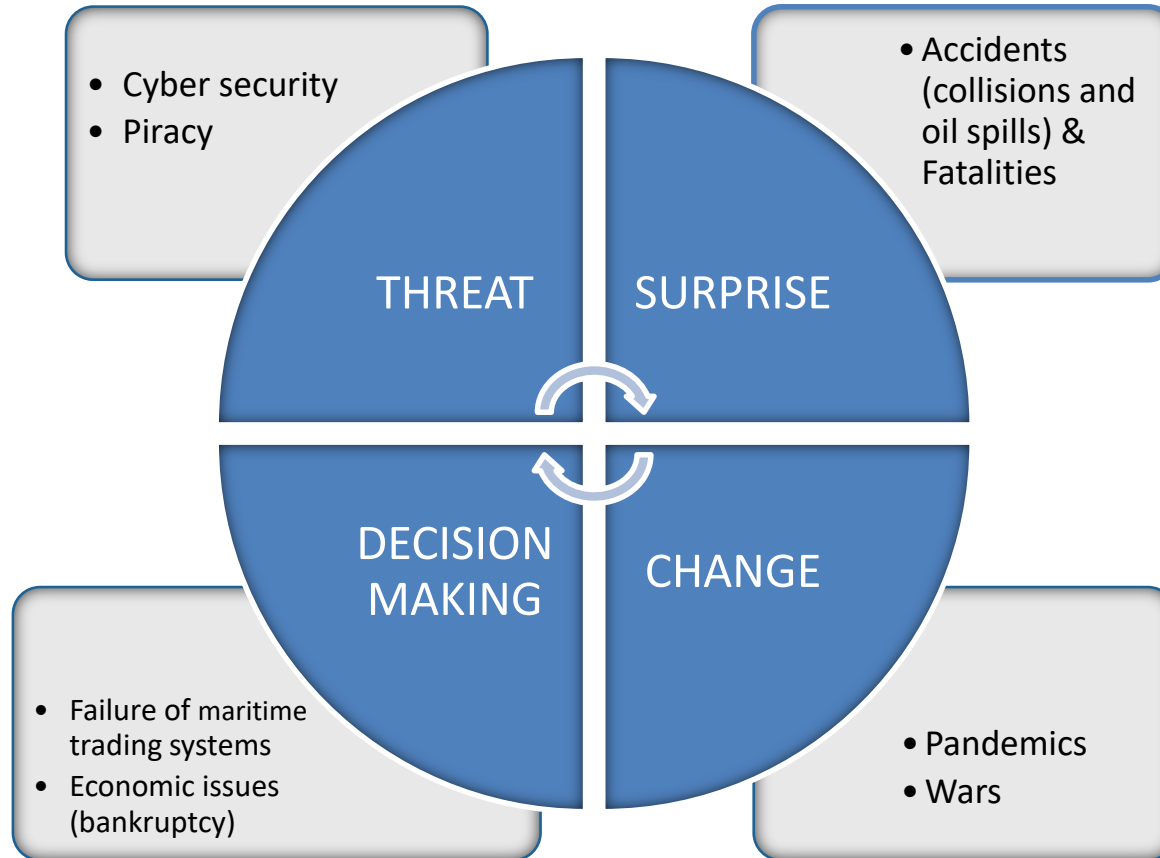
*“The ability of people, households, communities, countries and systems to mitigate, adapt to and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth”*

USAID (2015). Resilience at USAID

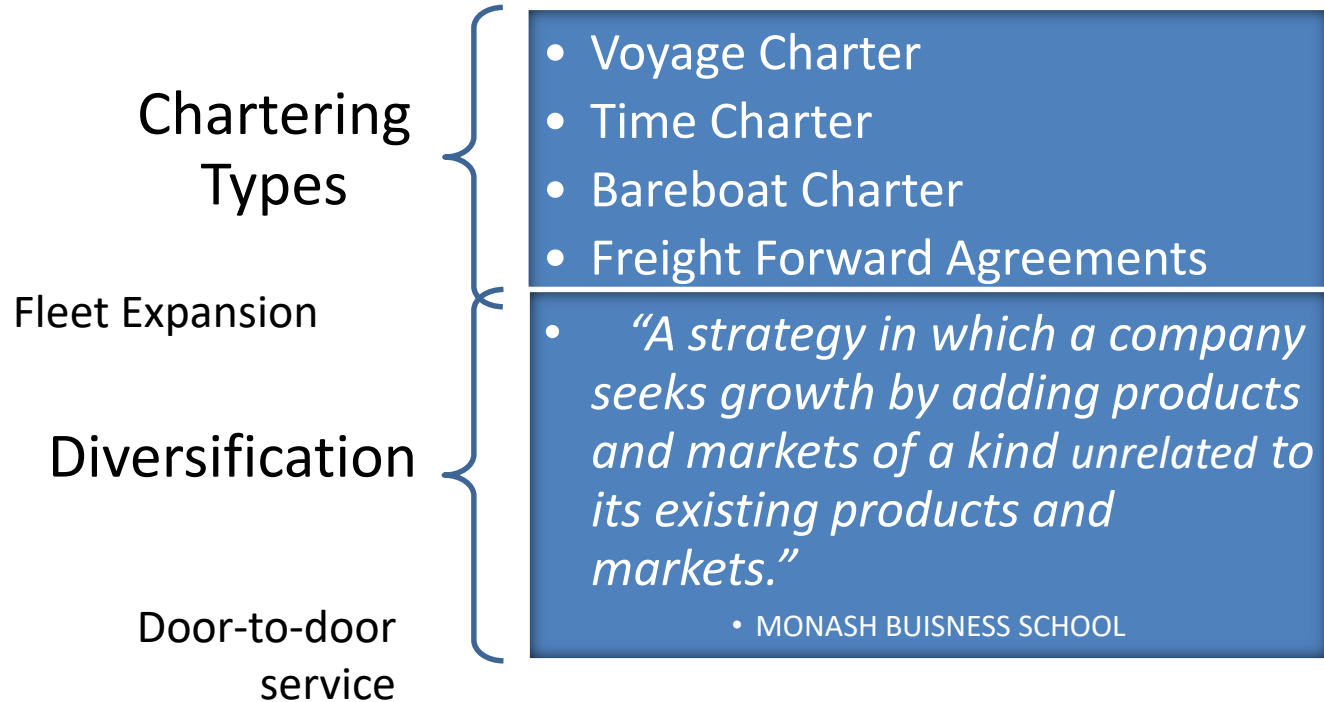
The resilience concept is often associated with other related concepts:

- Agility (1)
- Flexibility (2)
- Lean (3)

# CRISIS MANAGEMENT



## COMMERCIAL MANAGEMENT

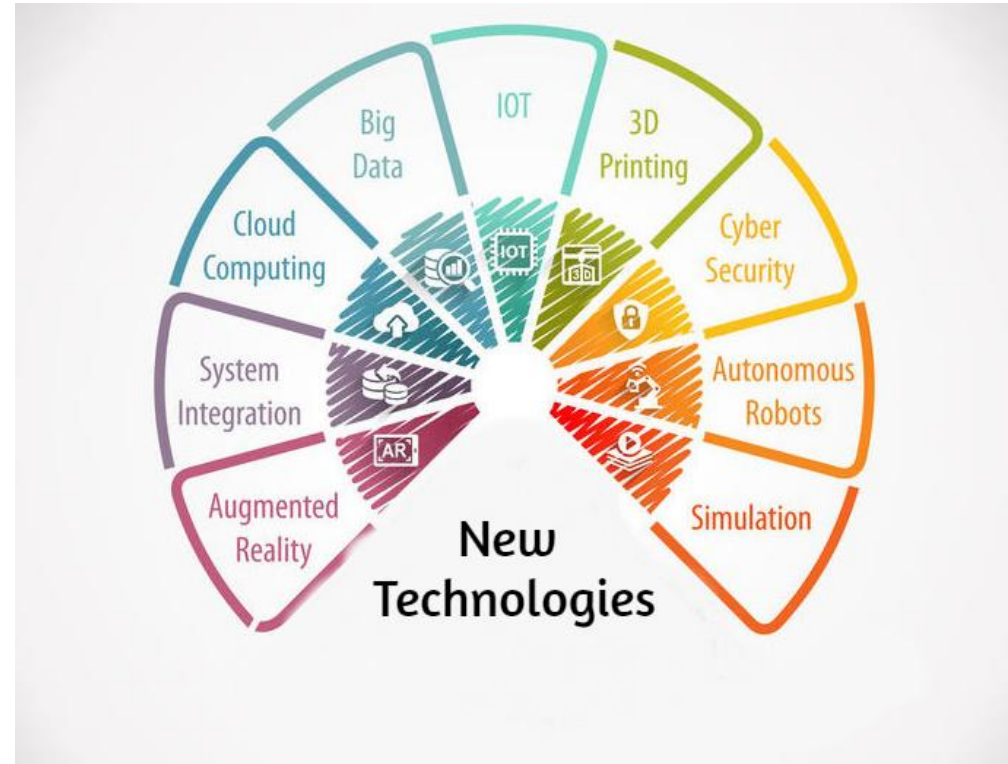




# DIGITALIZATION



- Work from home
- Block Chain

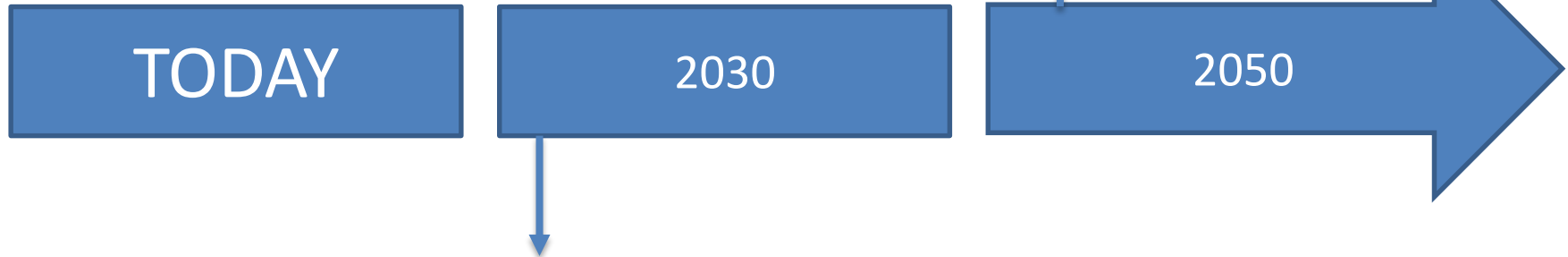




## IMO REGULATIONS



IMO Initial GHG Strategy objectives of 50% reduction of the total annual GHG emissions and 70% reduction of CO<sub>2</sub> emissions per transport work compared to 2008 whilst pursuing efforts towards phasing them out - as a point on a pathway of CO<sub>2</sub> emissions reduction consistent with the Paris Agreement temperature goals



TODAY

2030

2050

IMO Initial GHG Strategy objective of 40% reduction of CO<sub>2</sub> emissions per transport work compared to 2008, as an average across international shipping

**Green supply chain management (GSCM) :**  
**The incorporation of environmental considerations into supply chain management.**

# ITS NOT ONLY SHIPPING...



United Kingdom Ports  
Flooding caused by severe weather, strong winds, high tides, storm surges, 2013-2014  
£1.8m in damages to ports  
£40m in losses to port businesses

Port of Gulfport – Bienville Port – Pascagoula Port, Mississippi, USA  
Hurricane Katrina,  
\$1.7b in damages. Destruction of port infrastructure & superstructure

Port of Busan, South Korea  
Typhoon Maemi, 2013  
Port inoperable for 91 days

Port of New York/New Jersey, USA  
Hurricane Sand, 2012  
Port inoperable for 8 days

Port of Chennai, India  
Flooding, 2015  
Port severely damaged, impacting road and rail system

Port Vila, Vanuatu  
Cyclone Pam, 2015  
Severe damages to the port and city's seafont

Paranagua Port, Brazil  
Extreme Rainfall resulting in flooding and landslides, 2008  
Closure of port, \$350m in losses

Port of Melbourne, Australia  
Heat Waves, 2009  
Port shutdown for 3 days

# PORT ECOSYSTEM

## Policy Domain

Relationships between policy makers.  
National & Local Governments  
NGOs  
Labor Organizations  
Media  
Social trends  
Regulations  
Policies  
Legitimation

## Economic Domain

Commercial driven activities & relationships between:  
Shipping Companies  
Agencies  
Terminals  
Service Providers  
Competing Ports  
Economic Shocks  
Financial decision-making processes

## Operational Domain

- Relationships and activities required to perform basic operational activities
  - Cargo handling
- Nautical management
  - Delivery of services
    - Incidents
    - Accidents

## ACTIONS FOR A RESILIENT PORT



### ➤ Anticipation Capabilities

#### ➤ Observe – Identify – Prepare

- International Information Network
- Future needs of port users
- Long-term plan concerning their strategic port capacity planning.
- Information Management – Resource Allocation
- Business Continuity Management

### ➤ Cope Capabilities

#### ➤ Acceptance – Development – Implementation

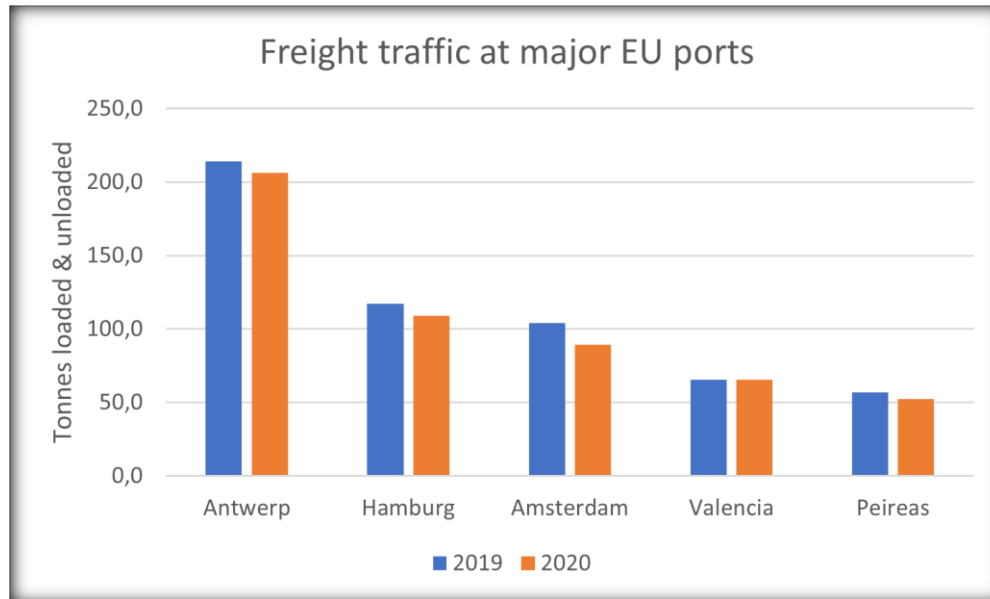
- Strong cooperation between all stakeholders
- Flow of information
- Crucial role for the Port Authority

### ➤ Adaptive Capabilities

#### ➤ Lessons learned – Implementation

- Formal & Informal Incident Management Processed
- Discussions
- Presentations

## HOW PORT' REACTED IN THE PANDEMIC



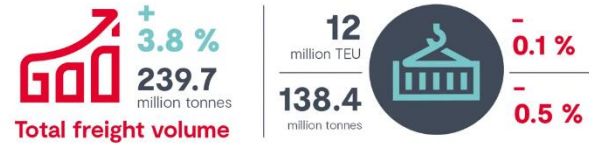
Source: European Commission, 2022

- Determination & Prioritization of essential activities
- Fast Track lanes
- Longer shift changeover time
- Rotation system
- Telecommuting – work from home
- Secondary office
- Optimization of the use of the existing anchorage areas and the use of temporary areas
- Communication strategy adjustment

# THE CASE OF ANTWERP'S PORT

- Determination of essential activities
- Continuous meeting
- Stakeholders' communication
- Webinars
- Face masks – sanitation products distribution
- Q&A website
- Work from home
- Secondary team
- Poster
- Campaign
- Help line for personnel

## Results Port of Antwerp 2021





## OUTCOMES

With Shipping and ports being crucial nodes in the global transport chains, the continuation of their operation is essential for the economic activities and the societies wellbeing

Shipping and port companies have to deal with uncertainty using tools that can be grouped in:

- Modelling tools
- Forecasting tools
- Project tools

Resilience is about elevating risk management [risk mitigation and adaptability]





Thank You