Container Inspection Safety Initiative

A Response to Containership Fires

NATIONAL CARGO BUREAU

...Safety of Life

and Cargo at Sea…

National Cargo Bureau was created in 1952 by the U.S. Coast Guard as a not-for-profit organization in order to assist the Coast Guard in the discharge of their responsibilities under the Safety of Life at Sea (SOLAS) Convention of 1948 and other purposes closely related thereto, and was given the mission of "Safety of Life and Cargo at Sea"

1947 Texas City Disaster

1948 SOLAS Convention

SOLAS 48 now applicable to Cargo Vessels as well as Passenger Vessels

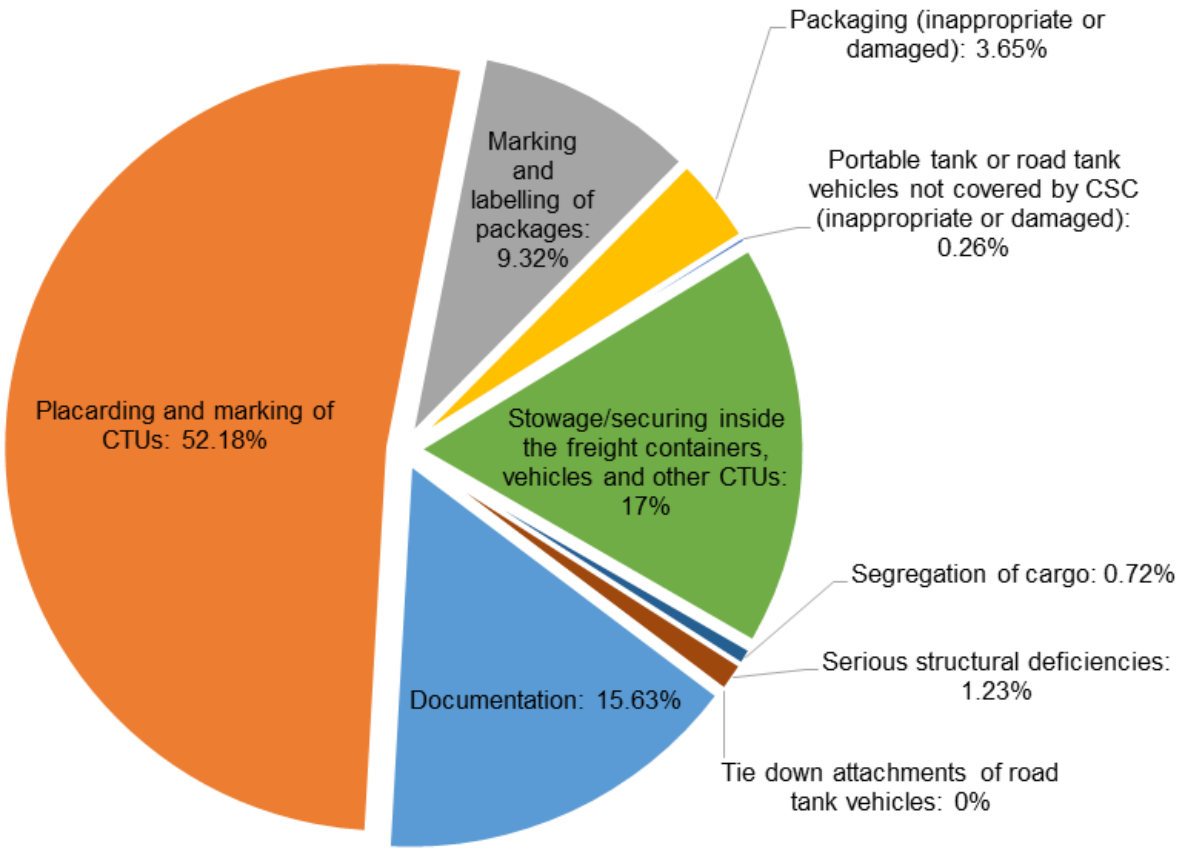
SOLAS 48 contained general rules concerning the transport of Dangerous Goods.

Container Inspections

2017 IMO
Consolidated Container Inspection Results

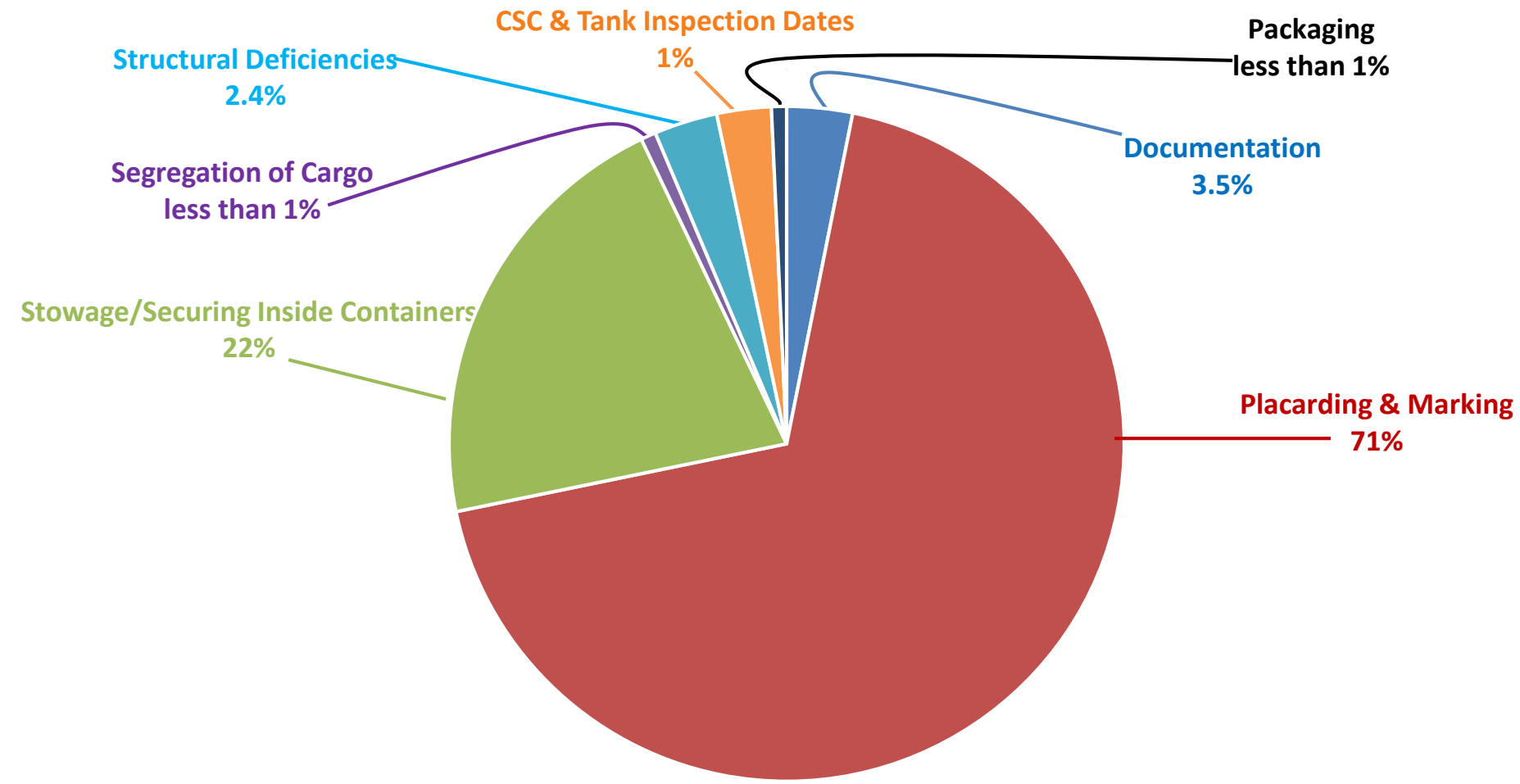
Participating Members - Canada, China, Republic of Korea, Chile, Finland, Sweden, United States
79,780 Inspected – 6,684 Containers with Deficiencies (8.38%)

SUMMARY OF CASUALTY AND INCIDENT REPORTS AND ANALYSIS



NCB Container Inspection Deficiencies 2017

31,390 Containers Inspected
2,778 Deficiencies Noted
9% Failure Rate



Container Inspection
U.S. Potential Deficiencies 2017

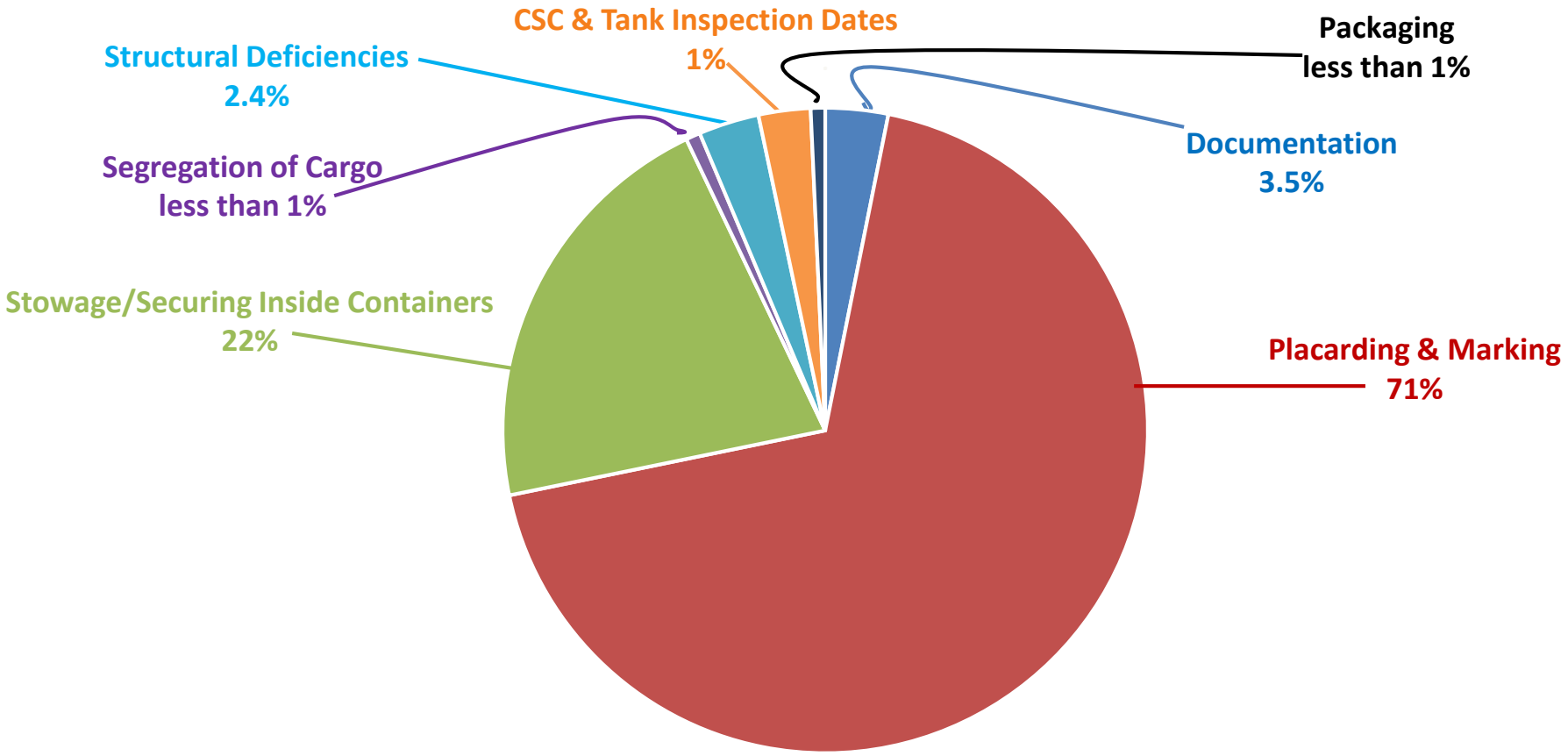
U.S. Exports TEU = 15,480,000 (Container Trade Statistics Ltd.)

9,288,000 Actual Containers Exported

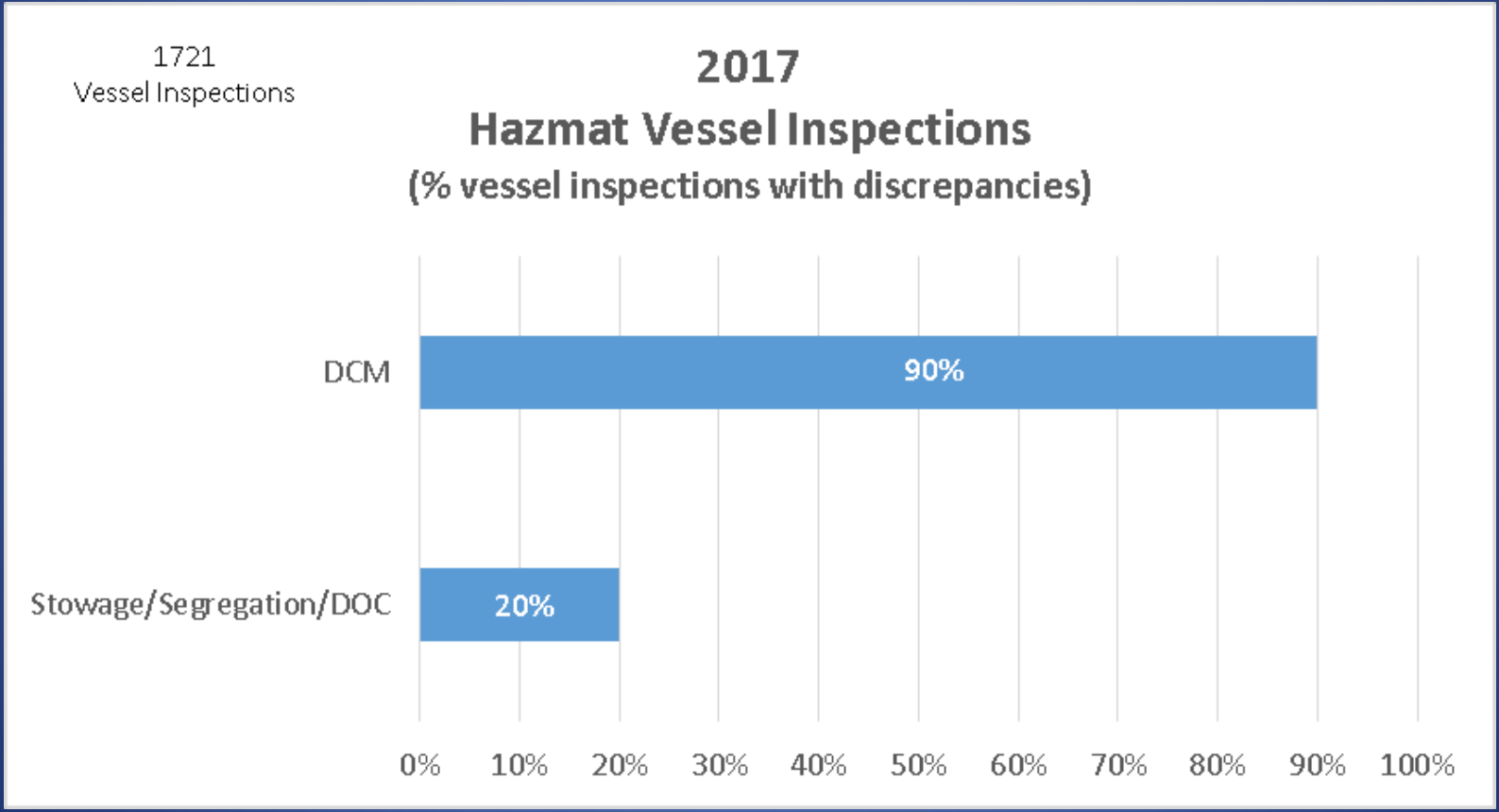
928,800 Dangerous Goods Container Exported

Based on NCB overall failure rate of 9%

83,592 Containers Containing DG are Exported with Deficiencies



NCB Vessel Inspection Statistics 2017



Consequences

Deficiencies

Result In Casualties

Consequences are Getting Bigger

Hyundai Fortune

March 21, 2006 – The crew of the 5,551 teu vessel abandoned ship south of the coast of Yemen after an explosion below deck caused a fire that spread throughout the ship. The fire burned for several days and one-third of the containers on board were damaged.

MSC Flaminia

July 14, 2012 – The 6,750 teu ship suffered a series of explosions in a cargo hold. The crew abandoned ship in the middle of the Atlantic Ocean. Three crew members died.

Eugen Maersk

June 13, 2013 – A fire broke out on this 11,000 teu vessel in the Gulf of Aden enroute to Rotterdam. The Eugen Maersk diverted to the port of Djibouti where the fire was extinguished on the 23rd of June. 16 containers were destroyed by the blaze.

Hansa Brandenburg

July 19, 2013 – The 1,740 teu containership caught fire while transiting the Indian Ocean. The fire was believed to have originated in a container and quickly spread to the ship's superstructure. The burning ship drifted for several days until the fire was brought under control.

APL Austria

February 12, 2017 – The 6,350 teu vessel carrying dangerous goods caught fire off the coast of South Africa and was forced to enter Port Elizabeth after the crew sent a distress call. The blaze took 2 days to get under control.

Maersk Honam

March 6, 2018 – A 15,226 teu ship. The MV Maersk Honam caught fire after an explosion, while transiting the Arabian Sea bound for the Suez Canal from it's last port of Singapore. Five seafarers died.

Maersk Honam

The fire started under deck in the forward hold just in front of the vessel's forward superstructure. The fire quickly engulfed the entire section of the vessel.

Maersk Honam

The fire took approximately 6 weeks to fully extinguish. With the exception of a few outboard containers most in this section of the vessel were fully consumed by the blaze.

Fires On board Vessels

According to the Swedish Club (P&I) just 0.76% of cargo claims are due to fire, yet in terms of cost, claims involving fire amounts to 28% of the combined losses from all types of claims.

Fires On board Vessels

- TT Club has stated that container ship fires occur at an average rate of one every 60 days
- One third of all shipboard fires originate in Cargo Spaces
- Seven out of ten fires occur while the vessel is underway. Only 1 in 10 fires occur while the vessel is in the shipyard or drydock.

Actions following Maersk Honam Fire

- The cause of the fire is believed to have started due to mis-declared hazardous cargo loaded in the forward hold of the vessel. The investigation is ongoing.
- Maersk has instituted a policy of not loading hazardous cargo adjacent to living spaces, and is revisiting the Documents of Compliance to restrict all Class 5.1 Oxidizers to on deck only stowage.
- Maersk approached National Cargo Bureau to begin a pilot program in the US to inspect 100 inbound containers to help identify mis-declared and undeclared cargoes. Program is named The Container Inspection Safety Initiative.

Container Inspection Safety Initiative

- In the aftermath of a containership fire the root cause is sometimes very difficult to determine.
- Sometimes declared cargo is suspected and other times it is assumed the cargo was mis-declared.
- The Container Inspection Safety Initiative is an industry effort to reveal the level of dangers that exist on every voyage, through the detection of mis-declared and / or insufficiently secured dangerous cargoes.

The Container Inspection Safety Initiative

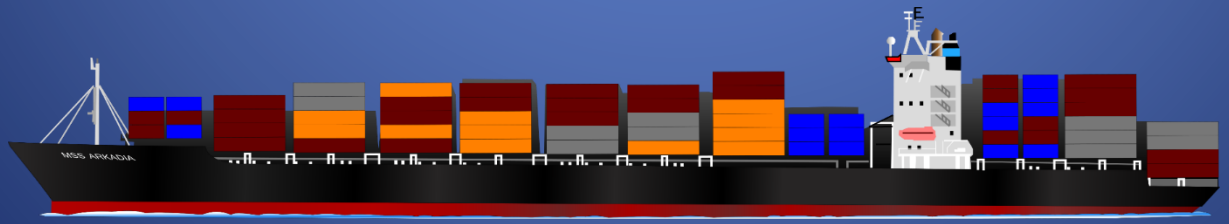
- Objective: Collect and analyze data which can be used to determine the extent to which safety issues exist and determine course of action to best promote safety compliance
- Plan: Inspect import containers which originate from ports lacking a robust compliance inspection program to determine future inspection targeting priorities
- Desired Results:
  - Globally increase the number of containers inspected
  - Increase safety awareness and regulatory compliance of container packers
  - Reduce shipboard incidents due to non-compliance of Dangerous Goods regulations

Extending the Safety Initiative to the Industry

- National Cargo Bureau inspects over 30,000 containers per annum, however, more than 99% of these units are export. As an organization we had very little data concerning the regulatory compliance of import containers.
- To ensure we obtained meaningful data concerning import containers, the **Container Inspection Safety Initiative** was extended to the 5 board member lines of the Cargo Incident Notification System (CINS).
- Each company was offered 100 container inspections.

Where We Stand

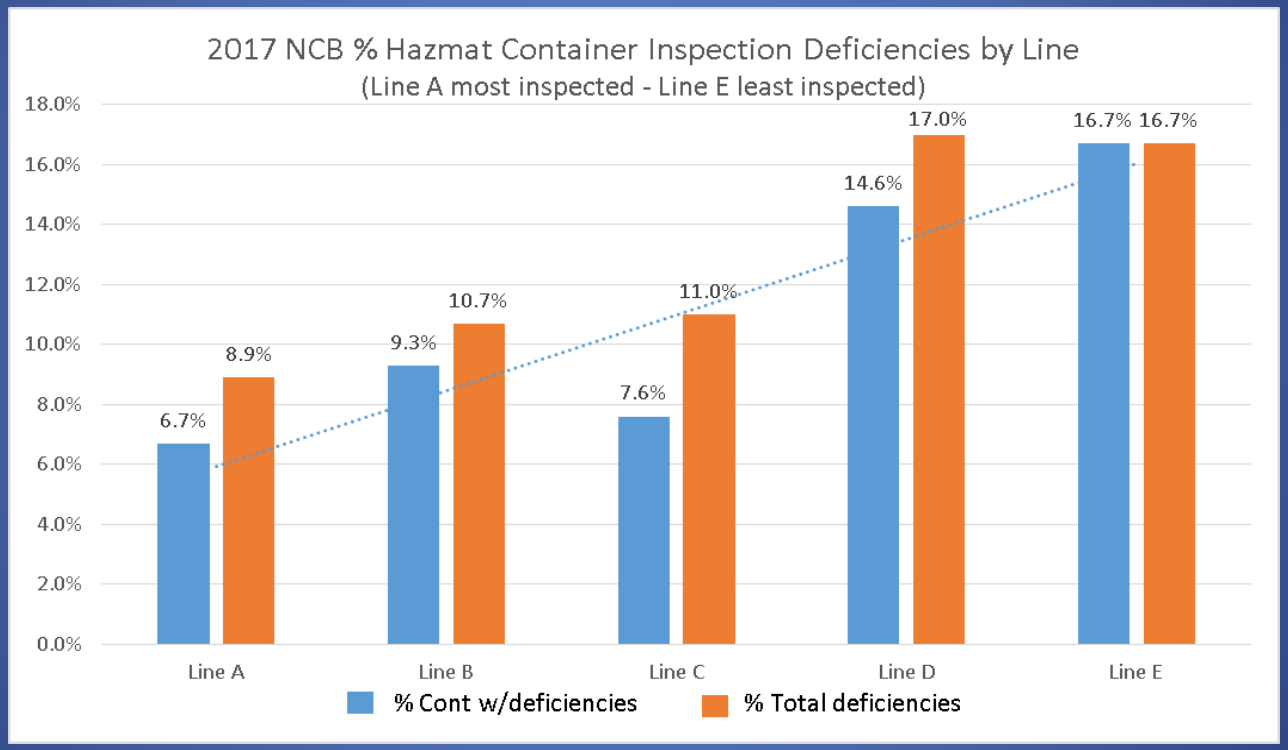
In addition to Maersk, CMA-CGM and Evergreen have agreed to take part in the initiative.



Why is an Industry Response Necessary

- All lines on all vessels
- Vessels only as safe as the weakest link
- Empirical data indicates a container inspection program reduces potential incidents

Container Inspections Reduce Deficiencies



Are Container Inspections the Answer?

Container Inspections
are only part of the answer

Ultimate Goal

- A Holistic Approach - Create an industry wide standard for a safety regime that all lines follow thereby raising the lowest common denominator.

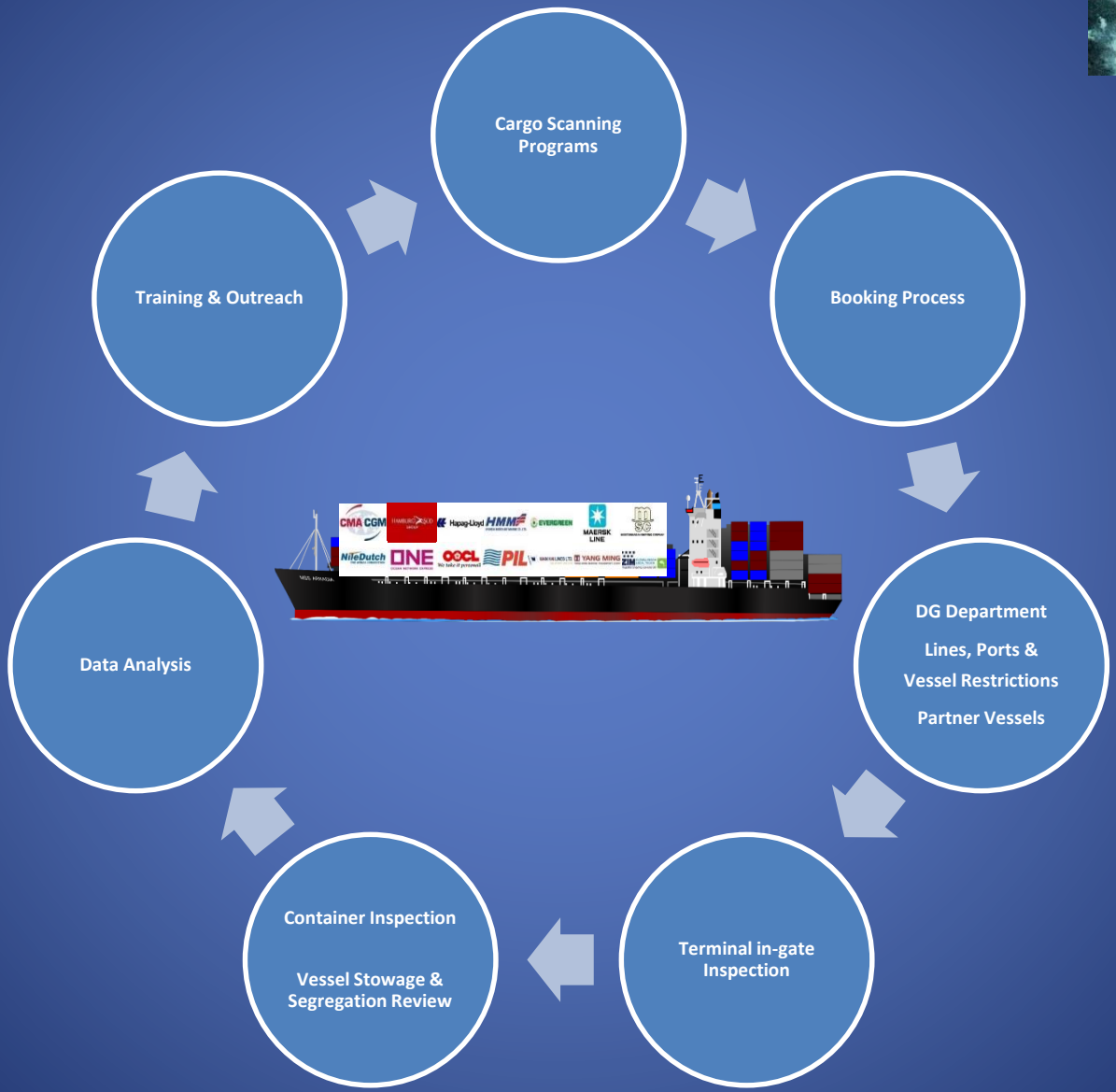
Industry Challenges to Safety

- Increase in Undeclared or Mis-declared Dangerous Goods
- General Lack of:
  - knowledge of the regulatory requirements and industry standards
  - Compliance with regulations (origin, international, destination)
- Large volumes of dangerous goods shipped (~10% of total)
- Complexity of the industry and trade lanes
- Speed / Just-in-Time

Alliances and vessel sharing agreements

- Vessel operator restrictions
- Charter vessel restrictions
- Port restrictions (load, transit, transshipment, discharge)

Holistic Approach



Holistic Approach

- Utilization of centralized data bases can ensure a minimum standard of safety for dangerous goods carriage and provide data for analyzation
- CINS, Cargo Scanning Programs , Hazcheck Programs, Container Inspections results
- Analyze data to address bad actors, recurrent issues and better target inspections

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