



Industry Standardization of Cargo Screening and Targeted Inspections

#IUMI2024 X



Introduction

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- NCB established in 1952 as a not for profit with a mission of “Safety of Life and Cargo at Sea”
- Created to render assistance to the USCG in discharging its responsibilities under SOLAS 48
- Catalyst for 1948 SOLAS Convention was a series of maritime disasters that demonstrated the need for uniform standards
- SOLAS 48 addressed the Carriage of Dangerous Goods and Grain Cargos for the first time
- Offices in most major ports in the US
- Surveying Staff consists primarily of licensed ex-mariners
- 2018 EXIS Acquisition rounds out DG service capabilities

Dangerous Goods – evaluating the evolving risks

- Dangerous Goods are subject to a very strict surveillance
- Adherence to all international, national and local legal requirements needs to be guaranteed
- Legal compliance is followed by a comprehensive risk assessment for each DG commodity
- Physical container inspection before loading to eliminate 3rd party risks
- Stowage precautions on board in order to further enhance safety
- Constructive emergency response based on cargo properties

Conclusion

Known Dangerous Goods transports are well planned, checked and executed by experts. The real risk we are exposed to, is the risk we can't see:

Dangerous Goods or other sensitive commodities that are not properly declared to shipping lines.



Actions Following Maersk Honam Fire



- Maersk approached National Cargo Bureau to begin a pilot program in the US to inspect 100 inbound containers to help identify unsafe cargoes including mis-declared and undeclared.
- Maersk issued an RFP for the creation of a digital cargo screening tool to flag mis and undeclared DG.

Extending the Safety Initiative to the Industry



- National Cargo Bureau inspects 30,000 containers per annum however, the vast majority of these units are export from the US. As an organization we had very little data concerning the regulatory compliance of import containers to the US.
- To ensure we obtained more meaningful data the Container Inspection Safety Initiative was extended to the industry.
- A total of 500 container inspections were conducted free of charge.

Inspection Results

Grand total	Failed	Failure rate	Failed Securing
500	274	55%	217 (43%)

DG	Total	Failed	Failure rate	Failed Securing	Failed placards/mks	Failed Docs/ Misdeclared
DG Imports	158	109	69%	69 (44%)	61 (39%)	12 (8%)
DG Exports	105	40	38%	26 (25%)	16 (15%)	5 (5%)

Non DG	Total	Failed Securing	Failure rate
Non DG Imports	187	96	51%
Non DG Exports	50	29	58%

Urgency is the Mother of Invention



- The total capacity of the world's cellular containership fleet is in excess of 28.5 Million TEU, 8% more than a year ago. It is expected to increase 10% this year.
- Container Lines are placing orders for 24,000+ TEU ships.
- From a technical standpoint, there is not any limit on the size a container ship can be. There are predictions that 50,000 TEU vessels will come in the coming decades.
- Estimates of nearly one billion TEU in transit by 2027.
- The demand for lithium-ion batteries is estimated to grow 30% a year through 2030. The demand for calcium hypochlorite is estimated to grow over 11% a year through 2031.
- All these staggering numbers suggest that the risk of misdeclared, undeclared and container ship fires may be worse in the future than it is today.

Cargo Safety Program

- The Cargo Safety Program - a digital solution to standardize the cargo screening and inspections at a global level.
 - a Common Cargo Screening Tool
 - a Verified Shipper Database
 - a Database of approved Container Inspection Companies
- The core functionality of the system will be to screen booking information against a comprehensive keyword library and risk algorithms. High-risk bookings will be flagged for further investigation and/or inspection, and the outcomes will be used to continuously improve the screening tool.
- The emphasis is on identifying and correcting dangerous conditions before containers with dangerous cargoes are introduced into the supply chain.
- NCB selected as the provider to deliver the digital solution and the various components of the Cargo Safety Program



Created on over 240 million Real Cargo Bookings



Continuously Train AI Models



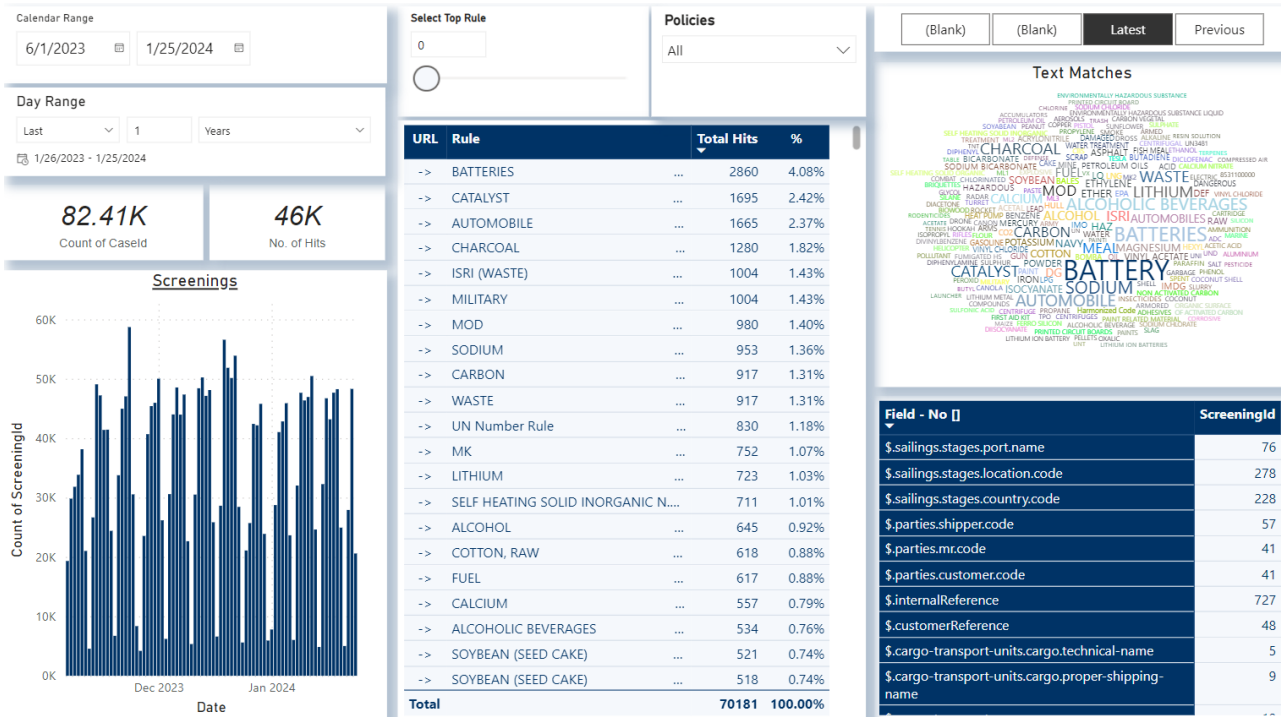
Identifies risks in Cargo bookings



Verifies the confidence of Dangerous Cargo



Probability of inspection failure



- Digital cargo screening tool
- Screens booking data for “key words” or “phrases”
- Flags potential mis or undeclared cargoes
- Designed to be interactive and utilized at any stage
- Returns results in seconds giving lines the ability to investigate prior to accepting the cargo
- Can be used for Trafficking and other purposes

RISK SUMMARY



99

⚠ High Overall Risk

🔍 4 Hits



Booking Irregularities

99

⚠ High Risk

⌚ Awaiting Action



Keyword Exposure

66

⚠ High Risk

⌚ Awaiting Action



Inspection Prospect

50

⚠ Medium Risk

⌚ Awaiting Action



Shipper History

40

⚠ Medium Risk

⌚ Awaiting Action

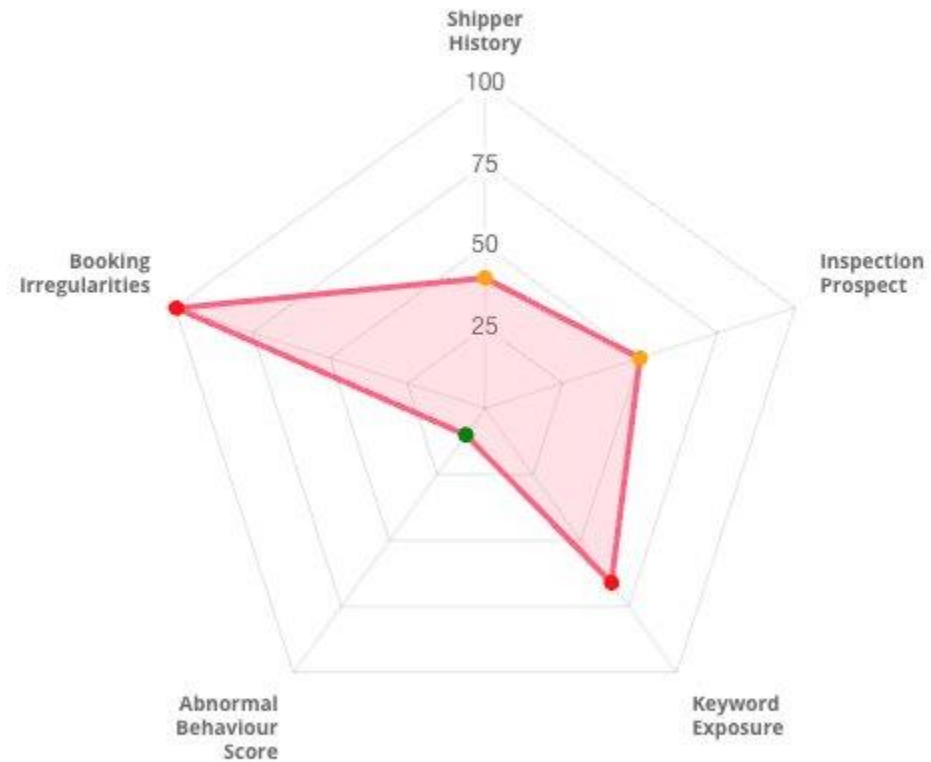


Abnormal Behaviour Score

10

✓ Low Risk

⌚ Awaiting Action



Verified misdeclared/Undeclared cases per week:

2023

➤ Q1: 161

➤ Q2: 238

➤ Q3: 293

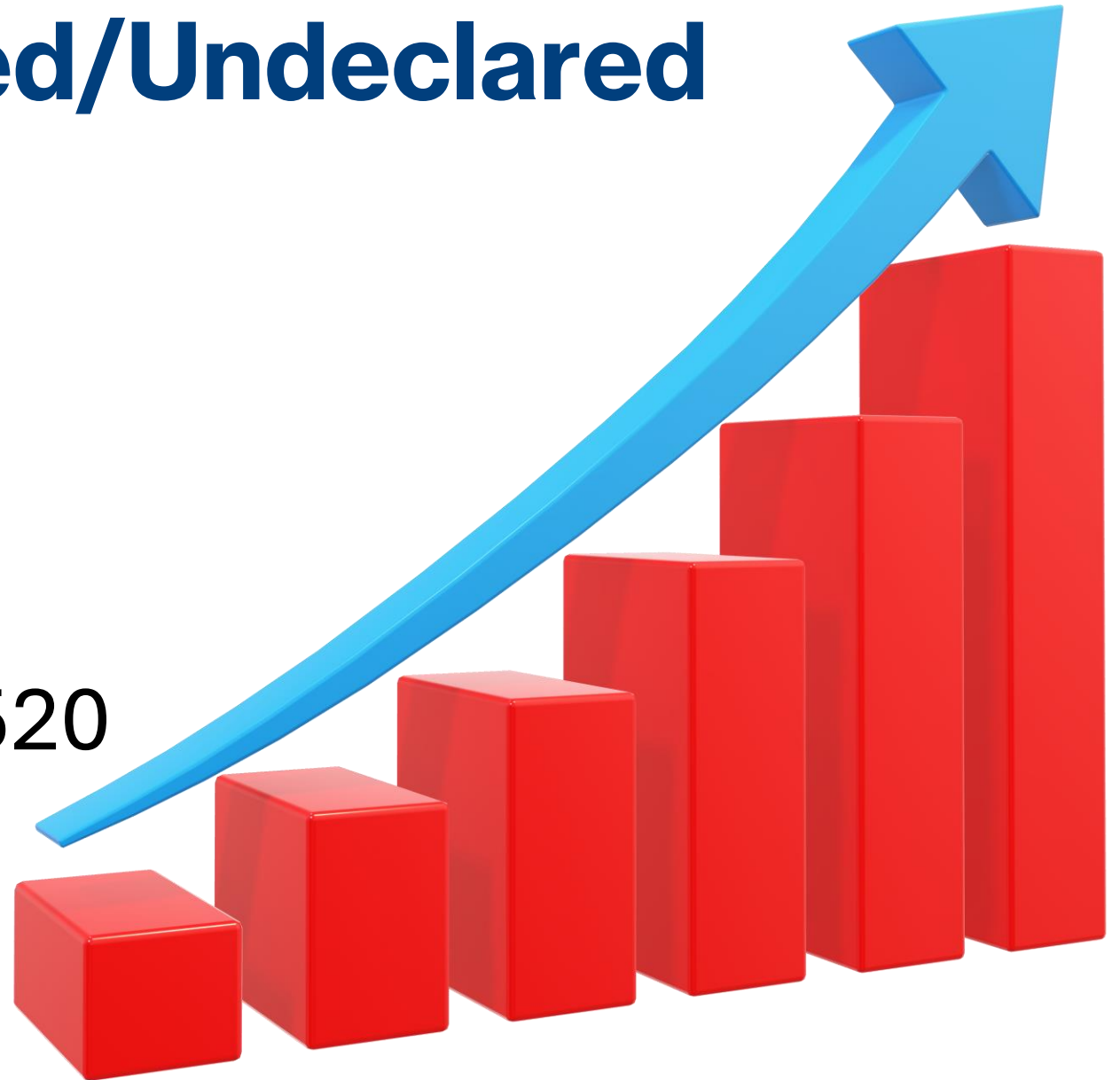
➤ Q4: 257

2024

➤ Q1: 328

➤ Q2: 457

➤ Q3 (qtd): 520



NCB HazCheck Detect at a glance



Thank you for your attention

NCB 
SAFETY OF LIFE AND CARGO AT SEA

Ian Lennard
President & CEO



Hapag-Lloyd

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