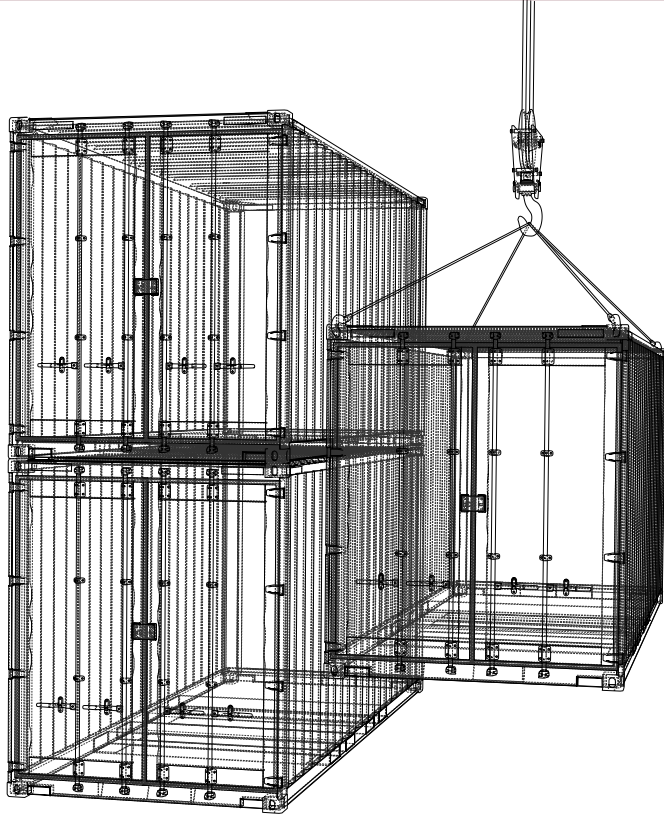


# Our Mission

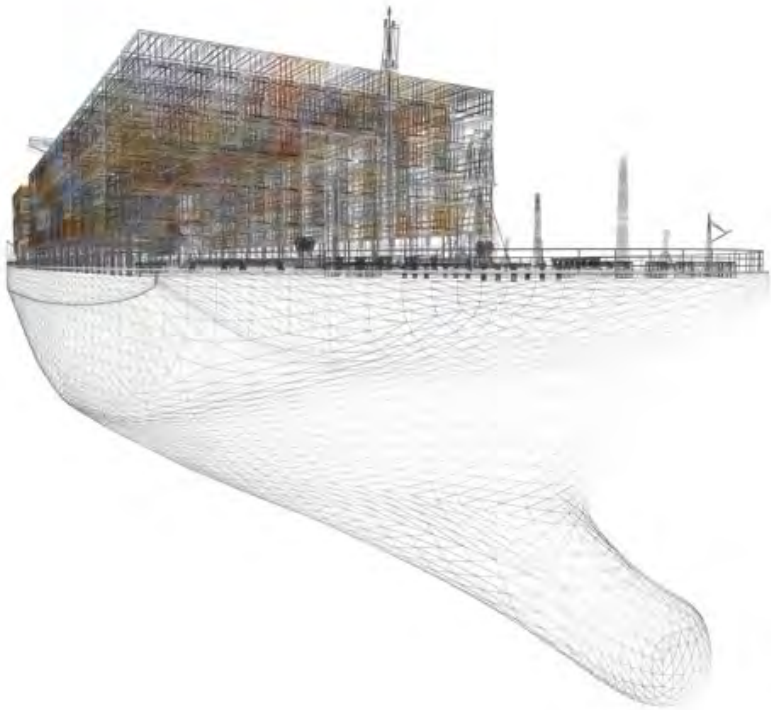


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We are on a mission to digitalise container cargo operations and build a global ecosystem to support shipping lines to reduce emissions.

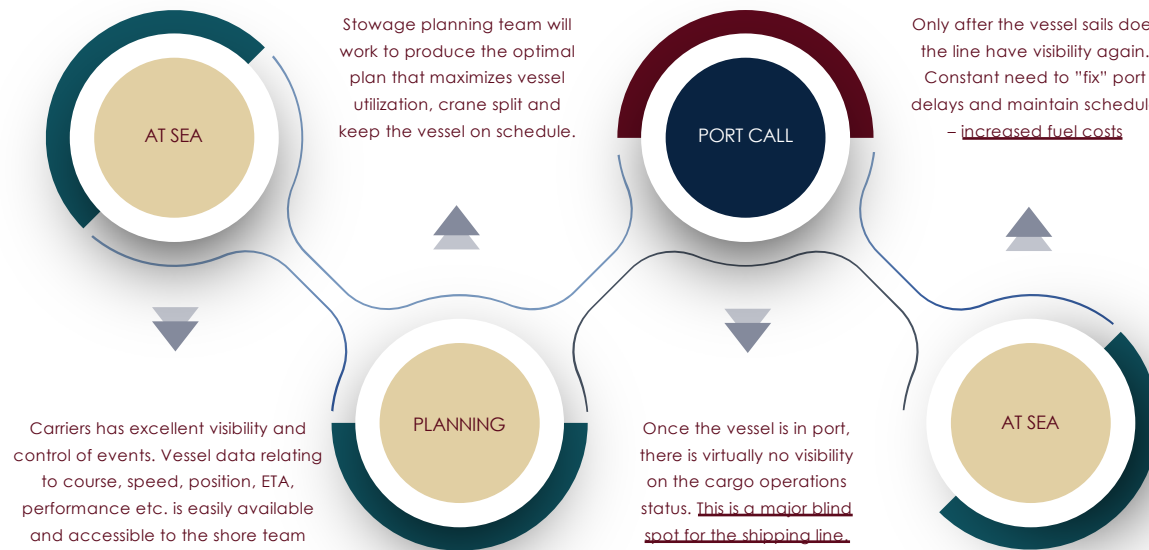
Enabled by technology, we provide personalised, accessible and real-time data for any vessel, in any port, anywhere in the world.

# Digital Cargo Operations



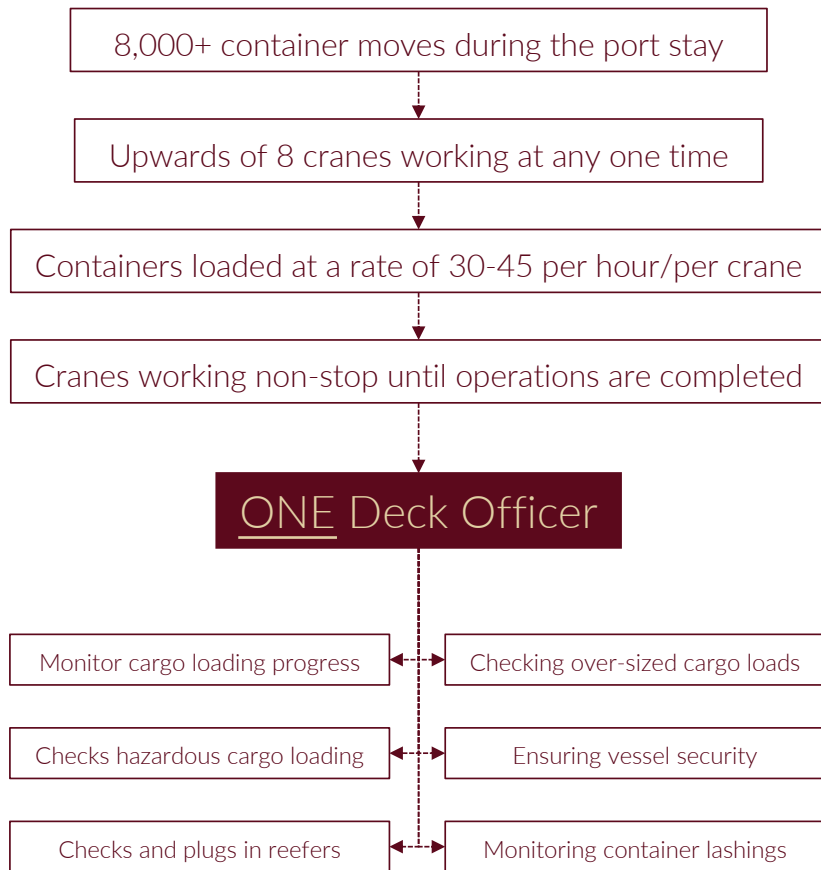
- Safer Operations, Safer Ships, Safer Seas
- Reducing excessive fuel consumption
- Real time performance monitoring

# Digital Blindspot



- No direct visibility on cargo operations
- Cargo operations onboard are paper-based
- Reliant on the terminal or agent for information
- No visibility on live terminal performance
- No visibility on actual sailing time
- Can only make decisions after vessel sails
- Extra fuel consumption to maintain schedule
- Affects the schedule and network integrity

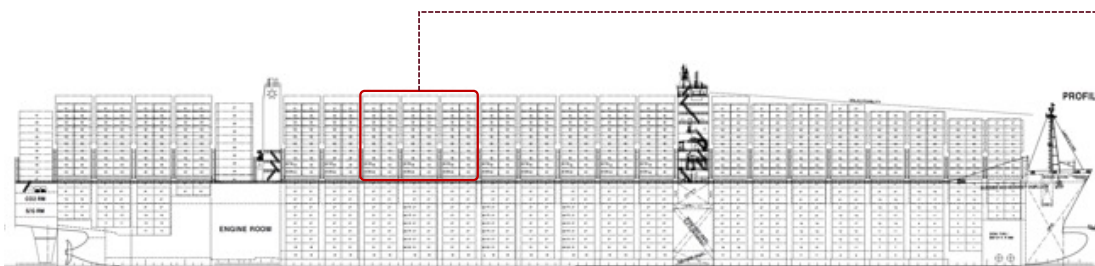
# Cargo Operations Reality





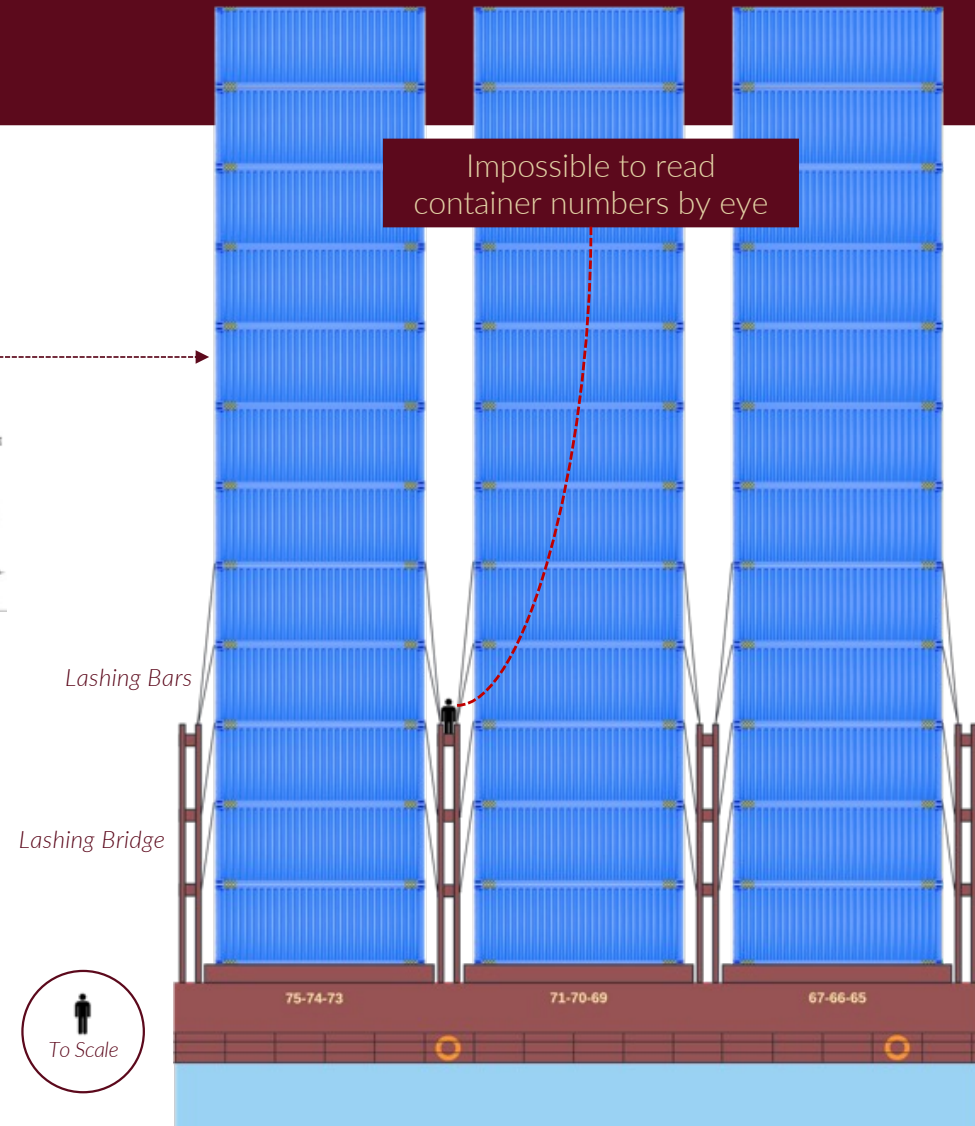
# Physical Limitations

It is physically impossible for the deck officers to check and verify the position of every container during the port call.



The vessel can only work on the basis that what the plan says is correct. Different ports have varying degrees of accuracy.

The process is 100% dependent on containers being loaded in the positions indicated in the load plan.



# Network Impact

One vessel can cause disruption to the entire network

- Second most critical hub port on the network
- Gateway port to North Europe, North America
- South America and West Africa

Algeciras

- Time critical point in the voyage
- Suez Canal has fixed transit times for convoys
- Additional fees applied to late vessels
- Vessel **must** burn extra fuel to arrive on time
- Missed convoy means 24 hours delay into EUR
- This delay cannot be recovered with extra speed

Suez

Realtime  
Vessel Data



Shore Portal

Shanghai

Predicting the vessel will depart late from Shanghai allows for pre-emptive action

Assess the vessel ability to speed up and maintain the schedule – at what cost?

Tanjung Pelepas

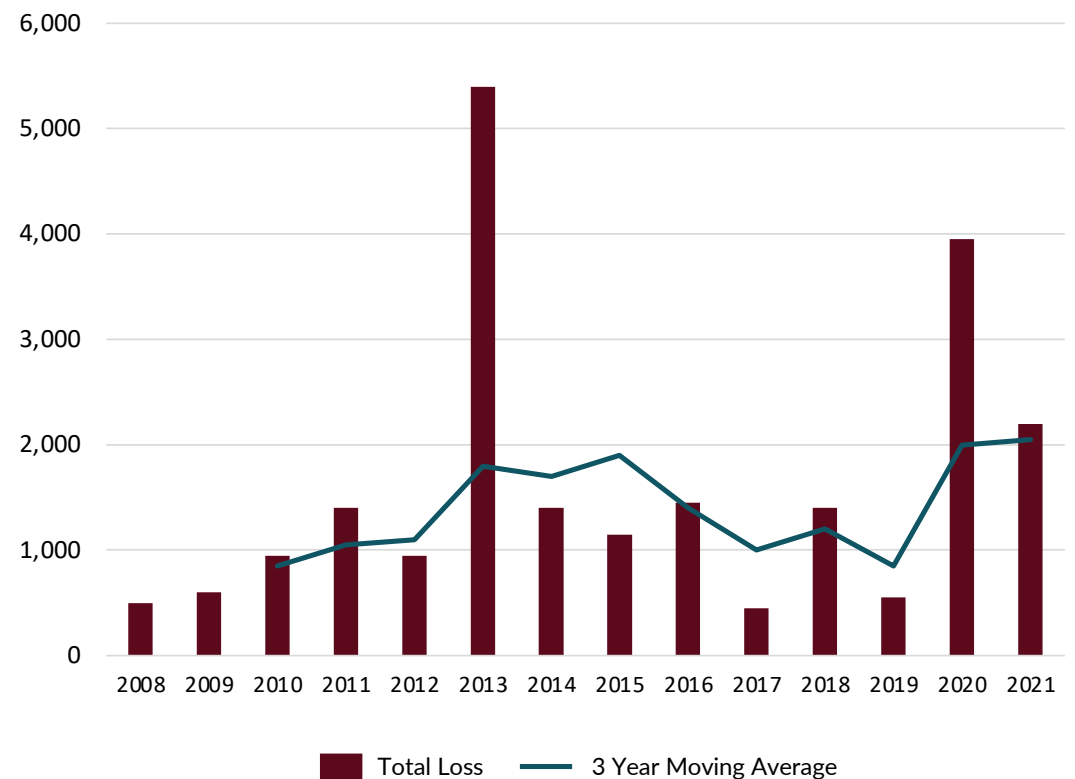
Impact analysis on the overall network before the vessel sails from Shanghai

- Most critical transshipment port in the network
- **40+ services** arriving and departing weekly
- Tight berthing window – 20 mins between vessels
- Missed connections use up valuable yard space
- Additional container storage fees are charged
- Yard capacity must be maintained at 85% or less
- Terminal productivity slows above 85% capacity

# Container Loss Statistics

Inaccurate data and outdated manual processes onboard increasingly large vessels, over-worked crews and lack of digital tools are also resulting in alarming increases in instances of container being lost overboard at sea.

## Summary of Containers Lost at Sea\*



# Ongoing Initiatives



MARIN TopTier Study: Triggered by the events late 2020 and early 2021, WSC and several of its Member lines are among the partners in the MARIN TopTier project. This project will run over three years and, based on scientific analyses, studies, and desktop as well as real-life measurements and data collection, aims to develop and publish at regular intervals specific, actionable and effective recommendations, developed by six different working groups, to increase container safety.

Revision of the IMO's guidelines for the inspection programs for cargo transport units, including containers: MSC 105 (April 2022) approved to amend the IMO guidelines for CTU inspection programs in order to: 1) clarify that the scope of application is to CTUs carrying all types of cargoes, not just those declared to be carrying dangerous goods; 2) adequately refer to the CTU Code; 3) to allow for inspection reports from non-governmental organizations to be included. World Shipping Council participated actively in the revision work.

Discrepancy in container stacking strength: WSC, working together with IMO Member governments and other industry associations, proposed to the IMO's Sub-Committee on Carriage of Cargoes and Containers (CCC 6) in September 2019 to align the Safe Container Convention (CSC)'s and ISO 1496-1 container stacking strength requirements, noting that the existing discrepancy might have significant safety implications, including collapsed container stacks and containers lost at sea. This is an issue that is now being considered as part of the MARIN TopTier project.





# Impact

The existing initiatives focus on the following areas:

- Legislation & Guidance Changes
- Structural features of container design/construction
- Vessel lashing equipment
- Revised ISO Standards
- Amendments to SOLAS Convention

With around 50 million TEU of containers in circulation, any regulatory changes will take years to have any real impact

A digital solution is urgently needed

## Environmental

- Lost containers create pollution for decades
- Incredibly difficult to recover containers lost at sea
- No knowledge of most container contents
- Potential hazard to small vessels/yachts at sea

## Financial

- Cargo insurance claims (approx. \$50K USD per TEU)
- Recovery and clean-up operations
- Container removal (from stack collapses)
- Repairs required to vessel
- Vessel out of service during repairs/recovery
- Disruption impact to wider network
- Potentially higher insurance premiums
- Customer initiated lawsuits (especially in the US)
- Customer financial losses

## Reputation

- Customer perception
- Large cases result in widespread publicity
- Reluctance for shippers to book again
- Potential vessel detention by Port State Authorities

# Our Solution



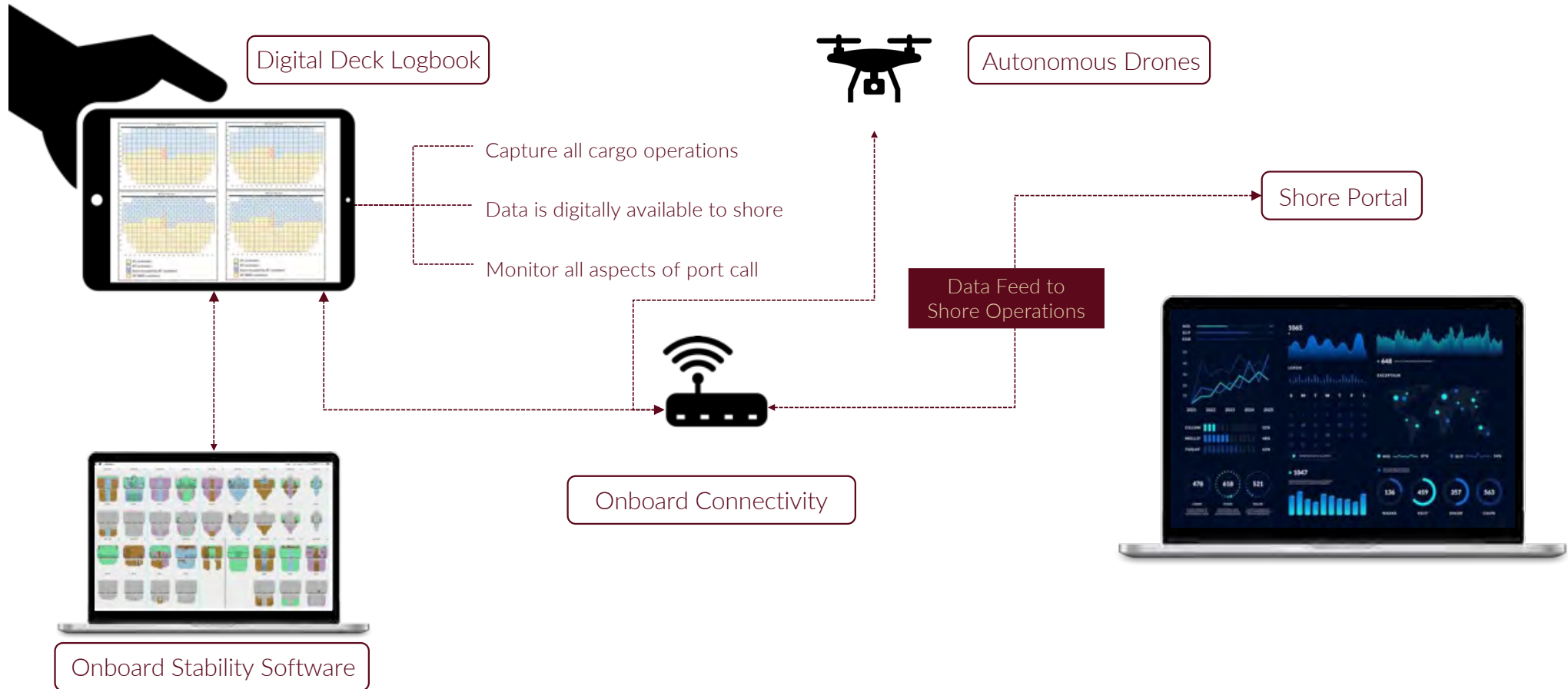
Empowering Shipping Lines

Increasing Port Productivity

Reducing Fuel Consumption

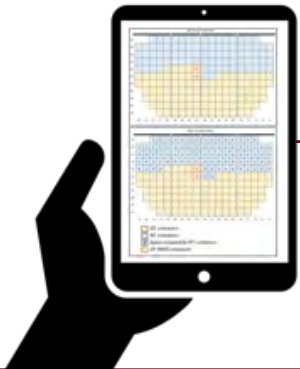
Reducing Accidents

# Connected Digital Ecosystem



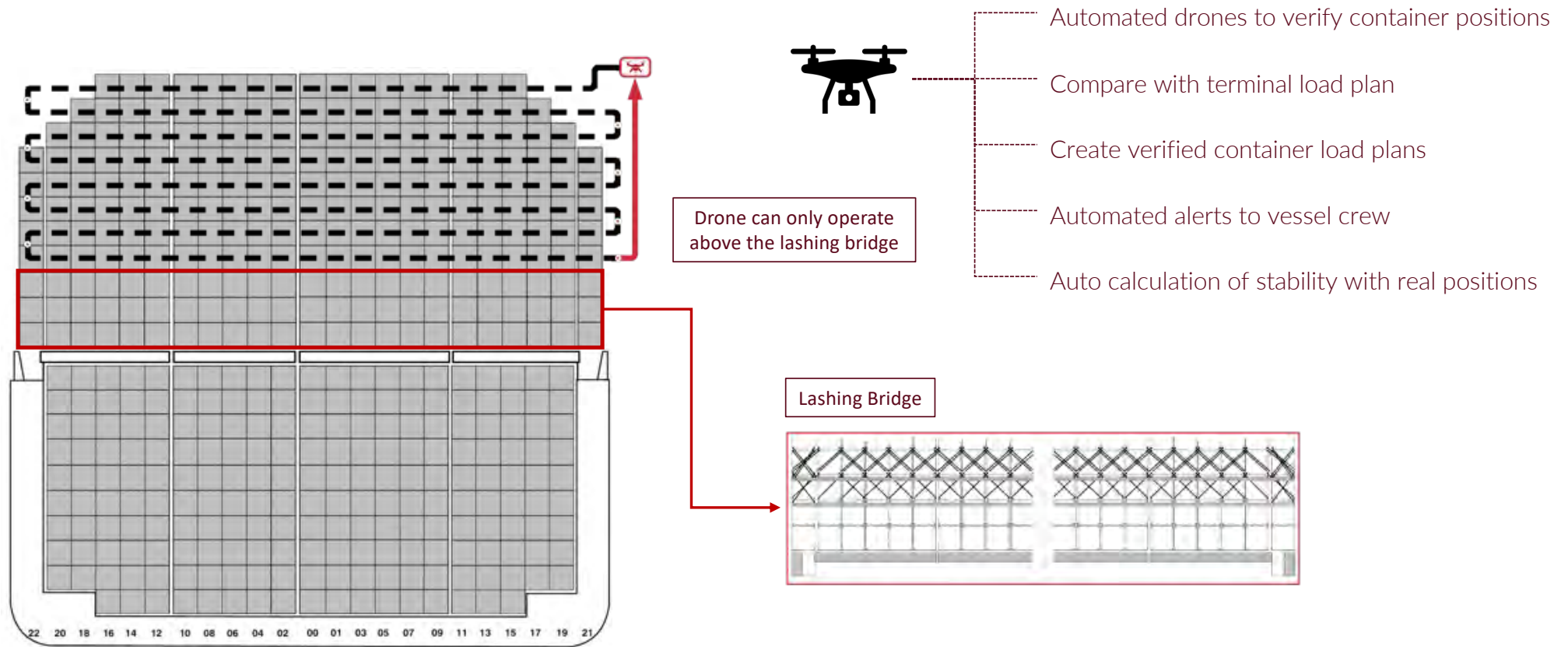
# Digital Deck Logbook

Digital Deck Logbook



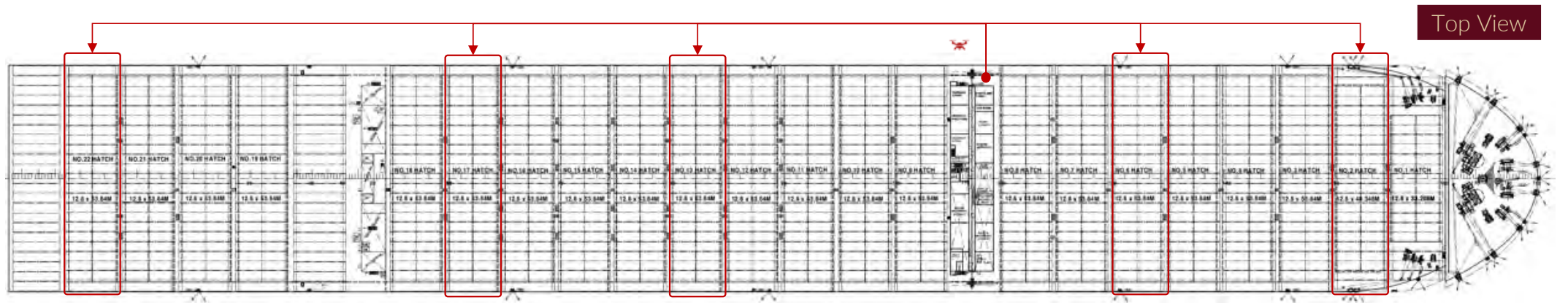
- Time stamps for all cargo operations
- Monitor and update container load/discharge operations
- Overview of all cranes and cargo operations
- Cargo operations time-stamps, crane movements, breaks etc
- Confirmation of IMDG cargo loading and positions
- Alerts for incorrect IMDG cargo loading
- Confirmation of Reefer cargo loading, plugged in & temperature
- Reefer cargo loading incorrect temperature alerts
- OOG cargo loading – securing and photo taking
- Lashings checklist and sign off as secured
- Digital copy of Cargo Securing Manual available on tablet
- Physical print out of logbook if legally required

# Drone Operations





# Drone Operations



# Shore Portal Overview

The true customer value comes from real-time visibility of cargo operations



Complete, real-time overview of all port activities

Live view of crane and berth productivity

Status of load/discharge operations

Predicted sailing time based on actual performance data

No need to rely on terminal to provide updates

Ability to make proactive decisions to protect schedule

Protect network integrity and reliability

Simpler decision making in schedule vs cut and run situations

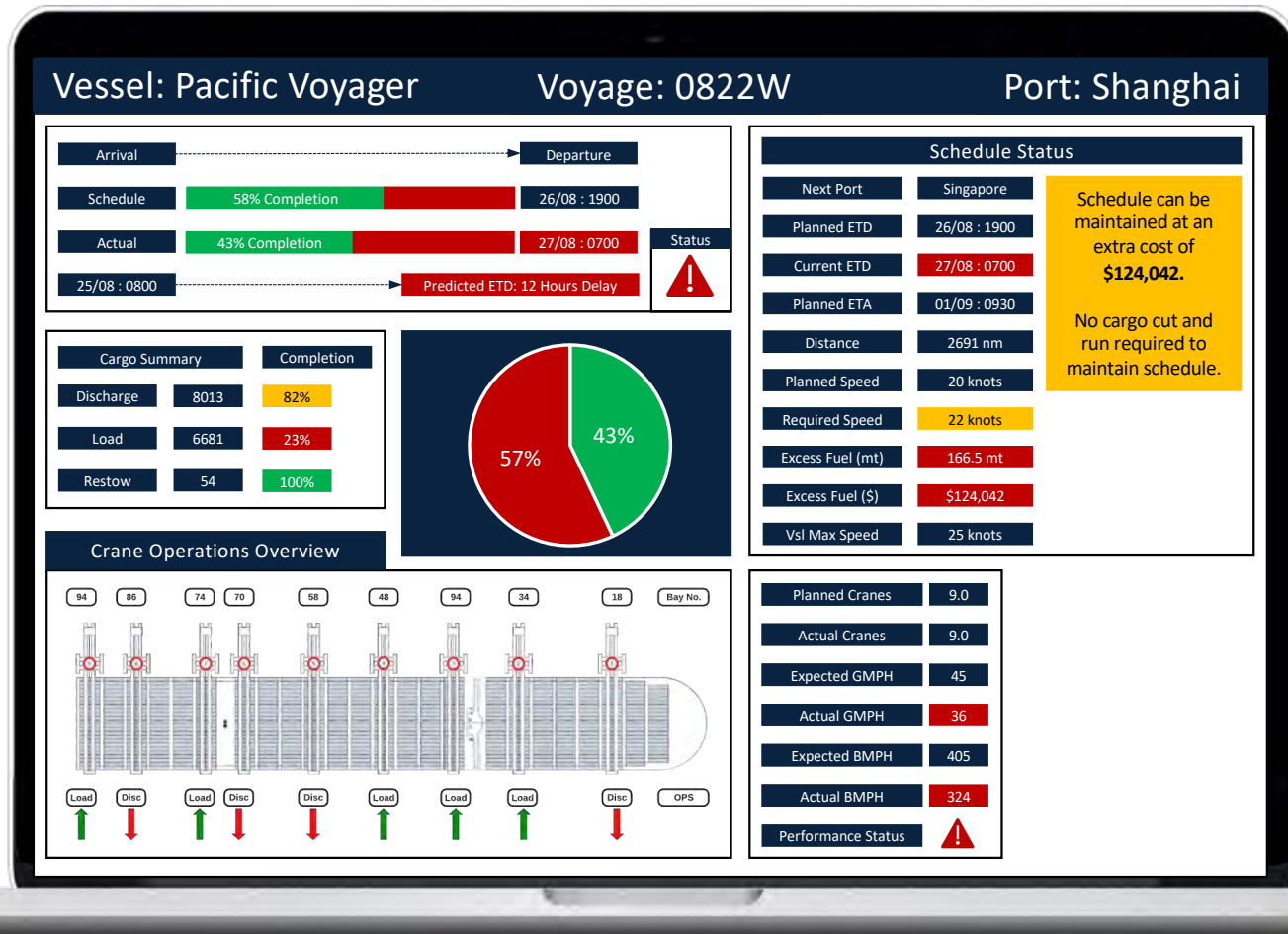
Cost impact scenario planning

Fuel savings, speed reductions and CO2 Emissions

Reduced Suez Canal Late Transit Fees

Improved network and hub performance

# Shore Portal Overview



Overview of Predicted ETD

Cargo Operations Overview

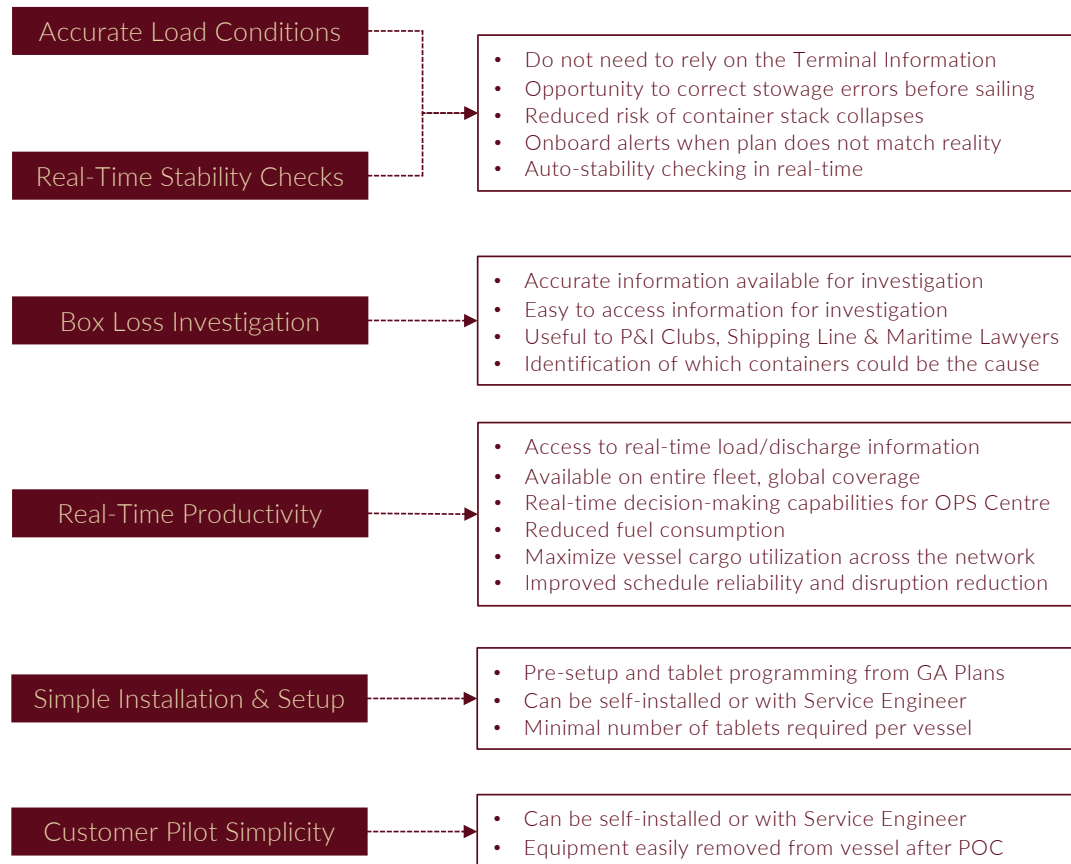
Crane Operations Overview

Schedule Impact Analysis

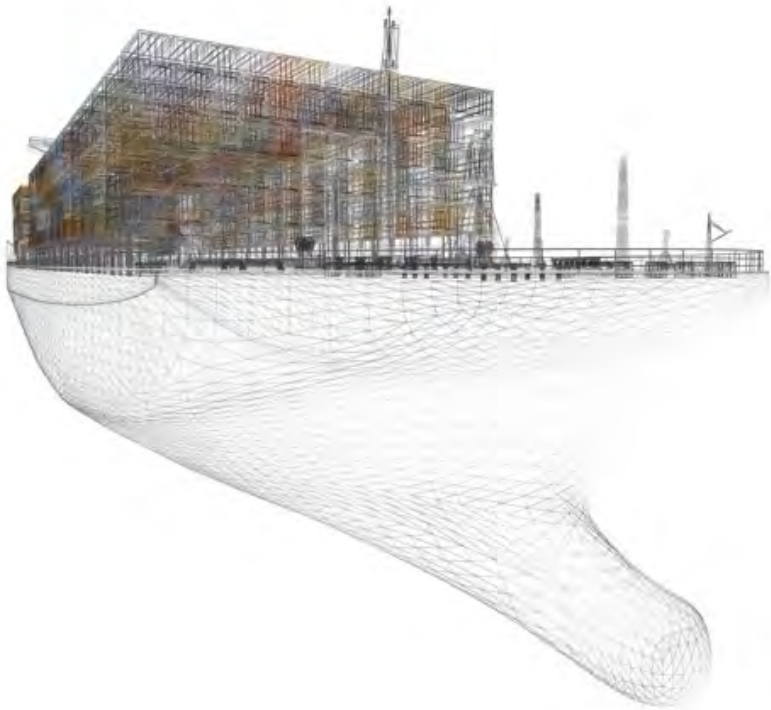
Fuel Consumption Analysis

Decision Making Tool

# Solution Benefits



# Digital Cargo Operations



- Safer Operations, Safer Ships, Safer Seas
- Reducing excessive fuel consumption
- Real time performance monitoring