Navigating
Excellence

**WHITE PAPER
SERIES**
PART FOUR

IDWAL ID

73
76
67

84
82
88

57
59
40

90
89
93

NAVIGATING EXCELLENCE

PART FOUR:

Key Inspection Considerations to Improve Your Fleet Condition

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Working with technical teams globally to help them achieve their aims

Ensuring a fleet remains operationally efficient, safe, and compliant with ever-evolving regulations is a fundamental challenge for shipping companies. Technical managers must balance maintenance, regulatory compliance, and cost-effectiveness while ensuring vessel longevity and performance.

At Idwal, we set the standard for vessel inspections by delivering clear, data-driven insights that support informed decision-making across the maritime industry.

As global independent leaders in inspections, our reputation is built on technical expertise, quality assurance, and an unwavering commitment to transparency. Since our founding in 2010 as a division of Graig Shipping PLC, Idwal has evolved into a tech-enabled, independent maritime intelligence provider. Our unique Idwal Grade®, recognised industry-wide, provides a benchmark for vessel condition, ensuring consistency and reliability in fleet assessments. With a vast network of experienced marine surveyors, we have physically inspected more than 15% of the global fleet since 2019, covering over 15,000 unique vessels.

As we continue to refine our inspection methodologies, this whitepaper provides valuable insights into the key technical areas of a vessel that we assess and how our approach ensures accuracy, consistency, and actionable intelligence for the maritime sector.
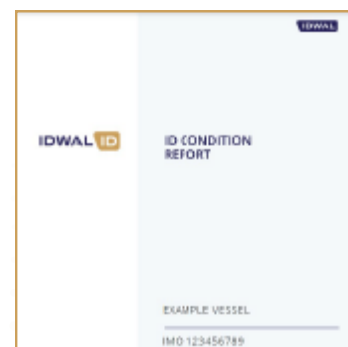
Comprehensive condition

The 14 sub grade sections covering the structural and cosmetic condition of the vessel including the operational ability of machinery and equipment. It also covers what machinery is installed including energy saving devices and technologies.

1. Vessel Condition

1.1 Design and Construction

1.2 Hull

1.3 Mooring Decks

1.4 Weather Decks and Fittings

1.5 Ballast Tanks and Systems

1.6 Accommodation

1.7 Bridge and Navigation Equipment

1.8 Engine Room and Machinery

1.9 Fire Fighting Equipment and Systems

1.10 Lifesaving Appliances

1.11 Safe Working Environment

1.12 Pollution Control

1.13 Onboard Management

1.14 Vessel Capabilities and Cargo Systems

Vessel Condition

1.1 Design and Construction
Evaluating whether a vessel meets international regulations and classification standards.
Advanced navigation systems and energy-efficient technologies can improve operational performance.

- Class society supervision
- Equipment and machinery installation
- Advanced navigation equipment
- Energy-saving devices
- Enhanced machinery for efficient operation

1.2 Hull
Assessing structural integrity, signs of damage, temporary repairs, coating condition, and marine fouling.

- Structural condition
- Damage assessment
- Temporary repairs or inserts
- Coating condition
- Hull markings
- Marine fouling

1.3 Mooring Decks
Inspecting structural integrity, coating condition, mooring machinery, anchor chains, and mooring lines.

- Structural condition
- Coating condition of deck plating and fittings
- Operational condition of mooring machinery
- Safety markings and tests
- Condition of anchor chains and mooring lines
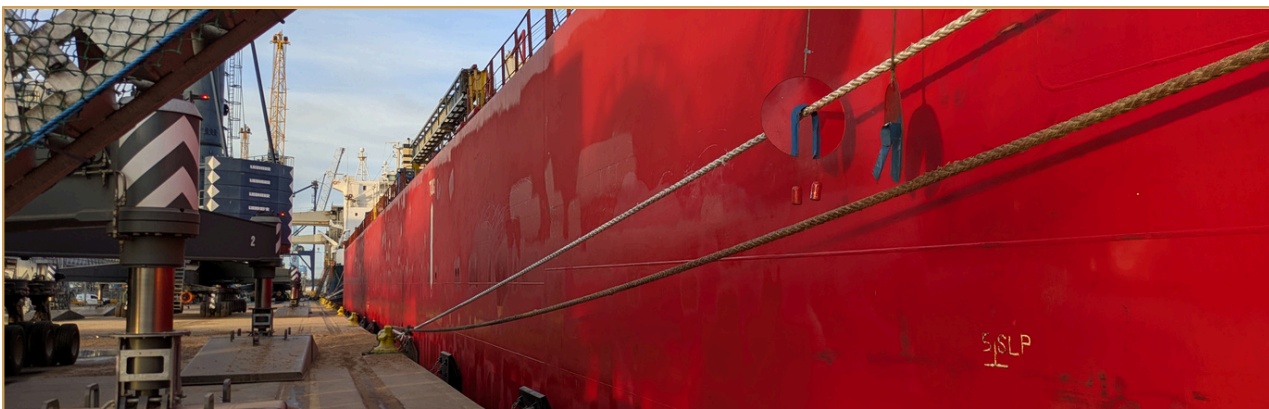
1.4 Weather Decks and Fittings

Ensuring the structural and cosmetic integrity of weather decks, stairways, access hatches, and installed equipment.

- Structural and cosmetic condition
- Condition of pipework, supports, stairways, access hatches, handrails
- Operational condition of deck machinery (winches, cranes, ladders)

1.5 Ballast Tanks and Systems

Monitoring corrosion levels, structural integrity, and the performance of ballast pumps and gauging systems.

- Structural condition of tanks
- Framing and fittings (access ladders, pipework)
- Corrosion levels and coating condition
- Associated systems (pumps, gauging systems, valve operating systems)

1.6 Accommodation

Reviewing living conditions, hygiene, maintenance of essential systems, and crew comfort.

- Condition of flooring, bulkheads, lighting, furnishings
- Housekeeping and hygiene
- Operational condition of various systems (AHU, galley equipment, toilet/vacuum system)
- Quality of outfitting and crew equipment

1.7 Bridge and Navigation Equipment

Confirming the functionality and layout of bridge and navigation systems, documentation accuracy, and overall safety.

- Installed equipment inventory
- Operational condition of navigation and radio equipment
- Bridge ergonomics
- Condition of windows, lighting, antennas, aerials
- Documentation and procedures

1.8 Engine Room and Machinery
Evaluating the condition of machinery, auxiliary systems, engine performance, and adherence to maintenance schedules.

- Installed equipment inventory
- Overall condition of machinery spaces
- Operational condition of critical and auxiliary machinery
- Systems condition (pipework, cooling systems, control room, switchboards)
- Key documentation review

1.9 Fire Fighting Equipment and Systems
Ensuring compliance with fire safety regulations, checking functionality, and verifying maintenance records.

- Fixed systems (CO2, foam, water mist)
- Main and emergency fire pumps
- Fire dampers, hoses, extinguishers, breathing apparatus
- Storage and maintenance of equipment

1.10 Lifesaving Appliances
Reviewing lifeboats, rafts, lifejackets, and emergency response equipment for readiness and compliance.

- Condition of lifeboats, life rafts, rescue boats
- Life jackets, immersion suits, life buoys
- EPIRBs, SARTs, embarkation ladders
- Maintenance status of equipment

1.11 Safe Working Environment
Identifying potential hazards, assessing safety signage, anti-slip surfaces, and mooring practices.

- Implementation of safe working practices
- Safety signage
- Anti-slip coatings
- Mooring practices
- Pilot ladder rigging

1.12 Pollution Control
Ensuring compliance with MARPOL regulations and the effectiveness of pollution control equipment.

- MARPOL compliance Operational condition of pollution control equipment (BWTS, STP)
- Overboard discharge valve control
- Log books and documentation (SOPEP)
- Control of ODS and asbestos

1.13 Onboard Management
Assessing maintenance records, regulatory adherence, and crew familiarity with safety procedures.

- Maintenance backlogs
- Officer familiarity with SMS
- Implementation of good practices
- Adherence to PPE and work/rest hours
- Relevant PSC history items

1.14 Vessel Capabilities and Cargo Systems
Reviewing specialised systems based on vessel type and cargo requirements.

- Vessel type-specific assessments
- Cargo handling equipment and systems
- Specialised equipment for different vessel types

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Vessel management considerations

Beyond physical condition, effective fleet management plays a vital role in maintaining a vessel's long-term viability. Below are key areas that impact operational efficiency and regulatory compliance.

1. Vessel Management

2.1 Forthcoming Regulatory Compliance

2.2 Crew Welfare

2.3 Crew Performance

2.4 Safety Management

2.5 Planned Maintenance System (PMS)

2.6 Classification and Certification

2.7 PSC Performance

Vessel management

2.1 Forthcoming Regulatory Compliance
Ensuring proactive compliance with upcoming regulatory changes such as BWTS, IHM, and EEXI.

- Assessment of compliance with upcoming regulations
- Preparedness for new requirements (e.g., BWTS, IHM, VGP, EEXI)

2.2 Crew Welfare
Evaluating the availability of welfare facilities, contract conditions, Wi-Fi access, and onboard training opportunities.

- Contract lengths
- Wi-Fi access and costs
- Digital onboard training facilities
- Other welfare-related amenities

2.3 Crew Performance
Reviewing crew competency, housekeeping standards, and maintenance execution.

- Implementation of PPE
- Quality of surface preparation for maintenance
- Housekeeping standards
- Adherence to maintenance schedules

2.4 Safety Management
Verifying adherence to safety policies, proper maintenance of emergency equipment, and risk mitigation measures.

- Onboard safety policies and enforcement
- Compliance with safe working procedures
- Maintenance of safety equipment
- Adherence to enclosed space procedures

2.5 Planned Maintenance System
Ensuring planned maintenance is executed effectively to prevent machinery failures and downtime.

- Implementation effectiveness
- Overdue maintenance items
- Critical maintenance status
- PMS provider assessment

2.6 Classification and Certification
Reviewing classification society history, certification validity, and class-related conditions.

- Current and build classification society
- Conditions of Class
- Certificate validity
- Additional design or eco notations

2.7 PSC Performance
Analysing Port State Control inspection history to identify trends and potential compliance risks.

- PSC inspection history (previous 3 years)
- Average number of deficiencies per inspection
- Detention history
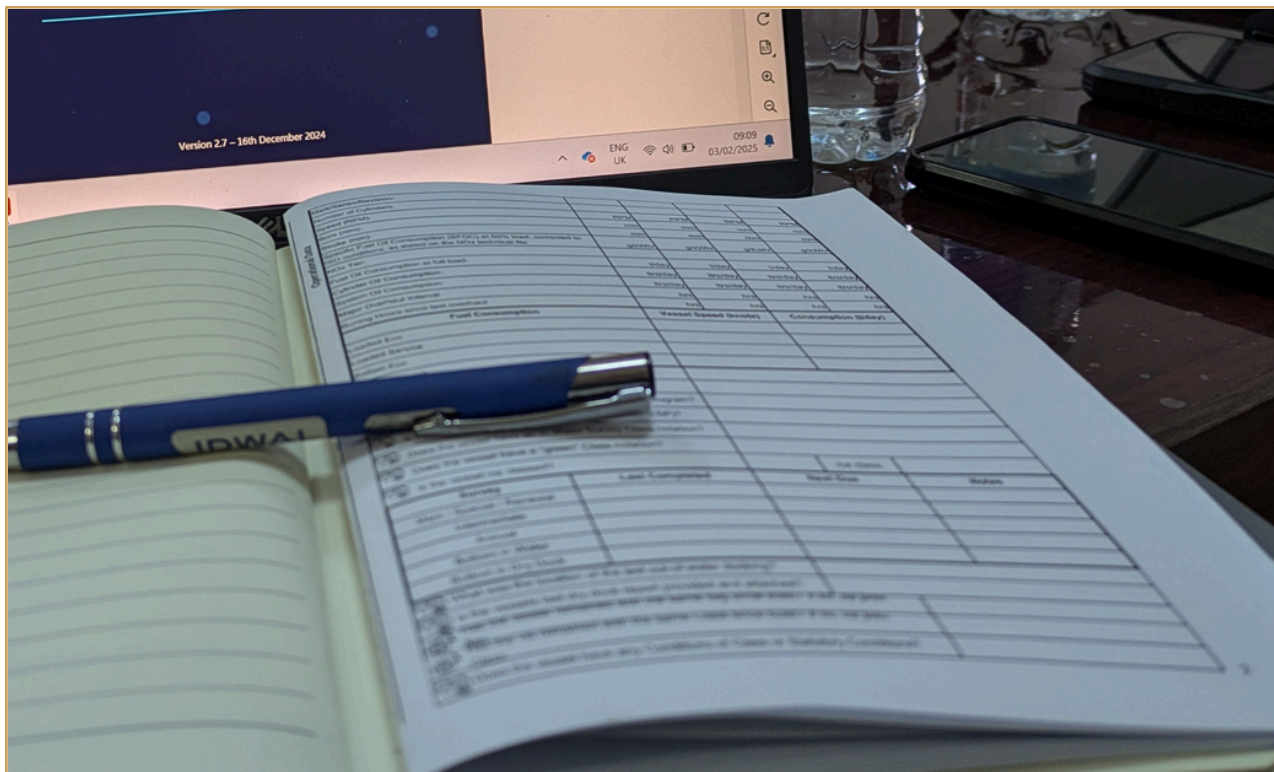
Applying expert technical insight to fleet condition improvement

A data-driven condition improvement programme

At Idwal, we go beyond traditional vessel inspections. Our unique combination of highly trained surveyors, cutting-edge technology, and deep data insights enables shipowners, operators, and financiers to proactively manage fleet condition and operational risks. By applying our expertise to Idwal ID, our structured condition improvement programme, stakeholders can gain a competitive advantage in efficiency, compliance, and long-term asset integrity.

Why Objective Fleet Assessment Matters

Fleet managers and technical teams face growing challenges in maintaining high standards across their vessels. Some of the key barriers to optimal performance include:

- Lack of objective fleet condition assessment
- Inefficient defect management processes
- Difficulty in demonstrating technical performance to stakeholders
- Absence of data-driven improvement strategies

Transforming Data into Actionable Insights

Idwal ID provides a rapid, secure, and fully digital platform for managing vessel inspections and condition improvement. Our approach ensures that every inspection delivers measurable value by enabling shipowners and operators to:

- Access all inspection data, analytics, and defect management in one platform
- Maintain an impartial, bird's-eye view of fleet condition
- Close out defects efficiently and track improvements over time
- Benchmark technical performance both internally and externally
- Elevate operational standards and compliance
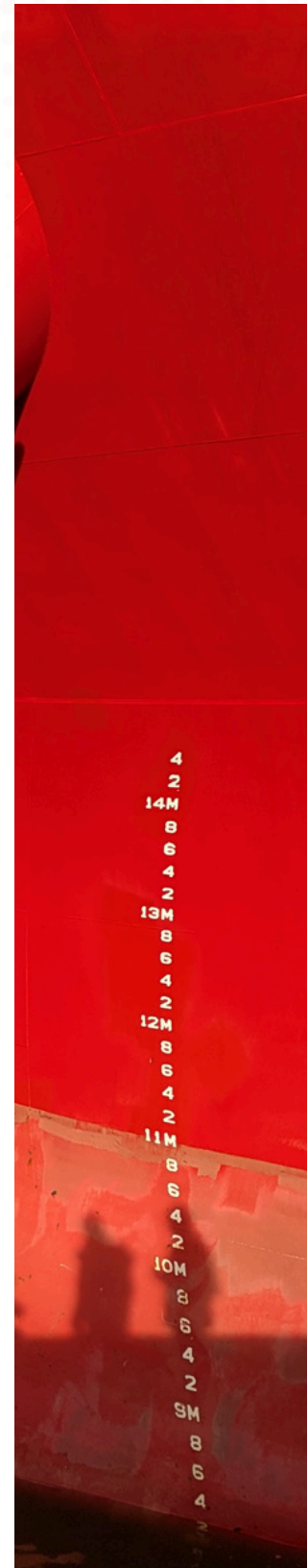
Idwal's Expertise

Our surveyors are carefully selected, extensively trained, and strategically positioned worldwide to conduct robust, standardised inspections. These inspections follow an industry-leading checklist and are quality-assured by our in-house technical team.

By leveraging this expertise, Idwal ID translates raw inspection data into structured insights that fleet managers can use to:

- Identify priority areas for investment
- Reduce risks associated with Port State Control (PSC) inspections
- Improve the commercial image of their vessels
- Enhance safety and operational performance

Future-Proofing Your Fleet

Idwal ID is continuously evolving, with platform developments that further enhance fleet monitoring and risk management. Key upcoming features include:

- Integrated insights on Port State Control deficiencies
- A dedicated module for high-risk vessel identification
- Enhanced user experience and analytics tools
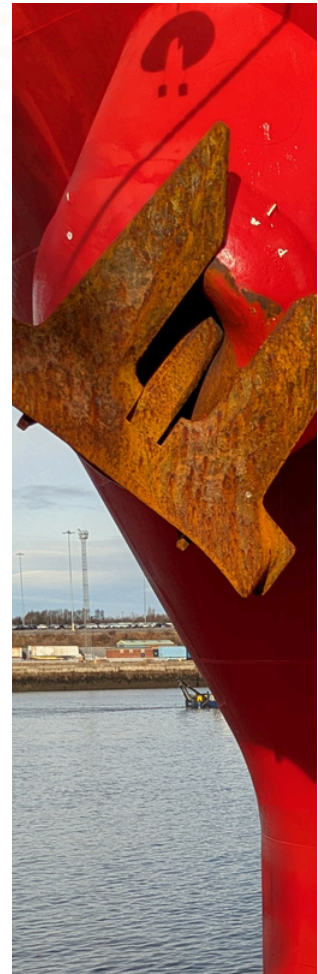
Ask us for more information about Idwal ID

A condition improvement programme powered by Idwal ID offers:

- Regular inspections across your fleet – ensuring up-to-date condition data
- Comprehensive defect tracking and benchmarking – providing fleet-wide oversight
- Access to technical experts – with dedicated support to guide improvement strategies
- Transparent, high-quality reporting – enabling better decision-making

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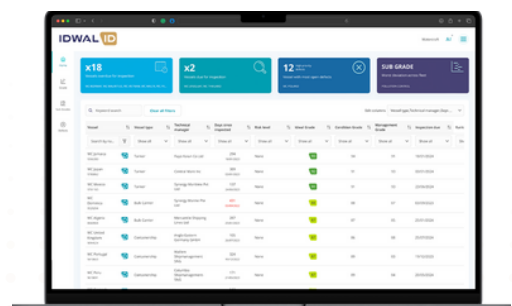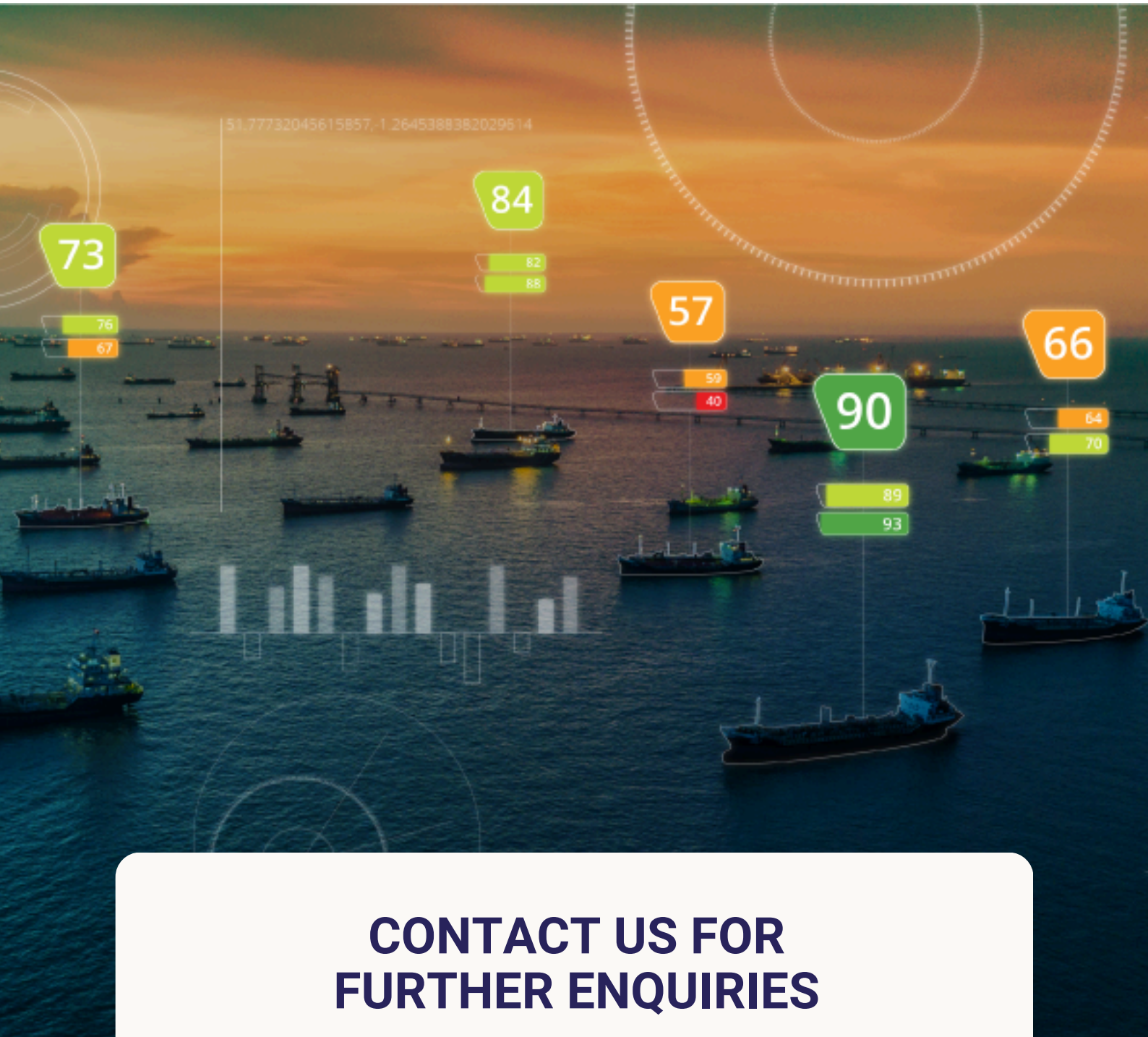
CONTACT US FOR FURTHER ENQUIRIES

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