

Smart Shipping and Maritime Digitalization Training Course

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Johannesburg

AGILE LEADERS
Training Center

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Ref: 2165_258526 **Date:** 17 – 21 October 2027 **Location:** Johannesburg **Fees:** 6000 Euro

Overview

Smart Shipping and Maritime Digitalization Training Course is a one-week professional course for shipping operations managers, fleet performance teams, technical superintendents and marine technology specialists, who leave with a Smart Shipping Implementation File. The course connects connected vessel operations, ship-shore data exchange, fleet performance analytics, voyage and fuel optimization, and maritime cyber risk management through practical decision tools. Agile Leaders Training Center presents smart shipping and maritime digitalization practice.

Who Should Attend

- Operations teams responsible for vessel performance and voyage execution
- Fleet teams responsible for data quality, dashboards and performance decisions
- Technical teams responsible for machinery condition and intervention priorities
- Digitalization teams responsible for connected systems and adoption roadmaps
- Logistics teams responsible for ship-shore coordination and information flow
- Technology teams responsible for maritime platforms, interfaces and controls

The course assumes participants work with shipping operations, vessel data or marine technology; it leaves out naval architecture design, autonomous vessel engineering and port-only systems.

Departments and Industries

The course supports digital operating decisions across shipping, marine logistics and offshore services.

- Shipowner and vessel operator departments
- Fleet performance and voyage optimization teams
- Technical management and marine engineering services
- Maritime logistics and terminal interface teams
- Offshore support and marine asset operations
- Digital technology and data governance functions

Learning Objectives

By the end of this course, participants will be able to:

- Analyze connected vessel data flows and operational dependencies.
- Build fleet performance indicators and decision dashboards.
- Apply voyage and fuel optimization methods.
- Evaluate predictive maintenance and digital twin use cases.
- Prioritize maritime cyber risk and data governance controls.
- Build a staged smart shipping implementation roadmap.

Course Agenda

Day 1: Map the Smart Shipping Environment

- Smart Shipping Operating Model Canvas
- Connected Vessel System Architecture Map
- Ship-Shore Data Exchange Flow Diagram
- E-navigation Information Integration Reference
- Digital Maturity Baseline Assessment

Day 2: Control Data and Fleet Performance

- Maritime Data Quality Rulebook
- Fleet Performance Indicator Tree
- Vessel Benchmarking and Normalization Method
- Operational Dashboard Design Template
- Exception Alert and Decision Escalation Matrix

Day 3: Optimize Voyages and Asset Performance

- Voyage Planning Constraint Map
- Fuel Consumption Driver Analysis
- Weather Routing Decision Method
- Predictive Maintenance Use-Case Canvas
- Digital Twin Scope and Validation Checklist

Day 4: Govern Digital Maritime Operations

- Maritime IT and OT Interface Register
- Cyber Risk Identification and Treatment Matrix
- Data Ownership and Access Control Model
- Automation Human-in-the-Loop Decision Guide
- Digital Change and Adoption Stakeholder Plan

Day 5: Practice Smart Shipping Implementation

- Exercise: Trace a Connected Vessel Data Failure
- Exercise: Diagnose a Fleet Performance Exception
- Exercise: Evaluate a Voyage and Fuel Decision
- Exercise: Prioritize Digital Asset and Cyber Controls
- Capstone Exercise: Complete the Smart Shipping Implementation File

Practical Exercises

The course uses suggested activities based on commercial shipping and offshore-support operating cases.

- Suggested activity: map shipboard sensors, communication links and shore-platform dependencies for a connected vessel.
- Suggested activity: build a fleet dashboard and investigate an abnormal performance signal.
- Suggested activity: compare voyage, fuel and machinery interventions under operational constraints.
- Suggested activity: sequence digital use cases, controls and change actions into an implementation roadmap.

FAQs

Who suits smart shipping training, and what does it assume?

Smart shipping training suits operations, fleet performance, technical management, logistics, digitalization and marine technology teams. It assumes experience with vessel operations or data and does not teach ship design or autonomous navigation engineering.

How does maritime digitalization training differ from general digital transformation training?

Maritime digitalization training focuses on connected vessels, ship-shore information, fleet analytics, voyage decisions, machinery condition and marine cyber interfaces. General digital transformation training applies broader organization-wide change models without these vessel operating dependencies.

What data supports fleet performance analytics in smart shipping?

Fleet performance analytics uses navigational, machinery, fuel, weather, cargo and operational-event data, supported by consistent definitions, quality rules, normalization and documented decision thresholds.

How does voyage and fuel optimization support smart shipping?

Voyage and fuel optimization combines route constraints, weather information, vessel condition, speed choices and service requirements to compare feasible operating decisions and document their tradeoffs.

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Why is maritime cyber risk management part of smart shipping?

Maritime cyber risk management protects connected IT and operational technology interfaces whose failure or compromise can affect safety, security, information integrity and continuity of vessel operations.

Conclusion

Participants take back a Smart Shipping Implementation File linking connected systems, data flows, performance measures, optimization choices, asset intelligence and controls. The file improves traceability from operational evidence to digital investment priorities. It also supports coordination among fleet, technical, operations, logistics and technology teams during staged implementation.