



# MEDPorts Training Program

Define

Measure

Measure

Improve

Control

# Lean Sigma

*in Ports*

On the sidelines of Marlog14



23-25 FEBRUARY, 2025  
Hilton Green Plaza, Alexandria



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Training Program



Ports are vital nodes in the global supply chain, handling vast amounts of cargo and facilitating international trade. However, these complex operations often face challenges such as long vessel turnaround times, congestion, bottlenecks in cargo flow, underutilized equipment, and delays in customs clearance. One of the most effective solutions for facing such challenges is Lean Six Sigma techniques, which is designed to equip port professionals with the knowledge and tools necessary to optimize their port operations.

Lean Six Sigma course provides a practical strategies and real-world examples that demonstrate measurable impact in maritime industry, whether the goal is to reduce downtime, improve cargo throughput, or enhance customer satisfaction

### Course Objectives:

- Understanding the core principles of Lean Six Sigma and how these methodologies apply to port operations.
- Learning how to define key port challenges and collect data to measure performance accurately.
- Understanding how to analyze port data, identify inefficiencies and performance issues.
- Learning how to develop actionable solutions to improve port operations using Lean Six Sigma tools.
- Delivering solutions to for sustainable performance and improvements



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## Course Deliverables:

- Practical understanding of how to apply Lean Six Sigma to port operations.
- Tools and templates for analyzing and improving port processes.
- A comprehensive action plan to implement Six Sigma projects within their port operations.



## DAY ONE

**Sunday**  
**23rd February**

1. Introduction to Lean Six Sigma and Its Application in Ports.
2. The DMAIC (Define, Measure, Analyze, Improve, Control) framework.
3. Overview of Port Operations: Cargo handling, vessel management, logistics flow.
4. Identifying Key Challenges: Delays, inefficiencies, equipment downtime, process bottlenecks.
5. Defining Problems and Setting Objectives.
6. Stakeholder Engagement.
7. Tools for Data Measurement.
8. Understanding Baseline Performance.



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## DAY TWO

Monday  
24th February

1. Mapping Port Processes.
2. Identifying Waste in Port Operations.
3. Using Root Cause Analysis.
4. Statistical Analysis.
5. Value Stream Mapping: Identifying and eliminating waste in port processes.
6. Developing Action Plans.
7. Process Optimization: Using Lean and Six Sigma tools.
8. Simulation and Pilot Testing.



## DAY THREE

Tuesday  
25th February

1. Control Tools: Control charts, checklists, and visual management systems for ongoing monitoring.
2. Setting Up Key Performance Indicators (KPIs).
3. Maintaining Efficiency Gains.
4. Sustaining Lean Six Sigma Culture: Techniques for encouraging continuous improvement and problemsolving.

### **Group Activity:**

Participants work on a mini-project related to a real-world port challenge, applying Lean Six Sigma tools to propose solutions