IMPROVED LEAN PROJECT MANAGEMENT PRACTICES FOR OFFSHORE AND MARINE DEVELOPMENTS



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Introduction

Improved Lean Project Management Practices for Offshore and Marine Developments examines how offshore delivery teams remove waste from engineering, fabrication, and installation while keeping safety and quality intact. This Training Course covers Lean thinking applied to offshore project life cycles, modular fabrication, and marine operations. Participants study the eight wastes of Lean, value stream mapping for fabrication yards, the Last Planner System with weekly work planning and percent plan complete, takt time and line-of-balance scheduling for repetitive fabrication, Theory of Constraints for yard bottlenecks, the PMBOK Guide performance domains, AACE International cost estimate classes, earned value management with SPI, CPI and TCPI, Monte Carlo schedule risk analysis for offshore weather windows, ISO 55000 asset management principles, HSE and offshore safety regulation, and 5S and standard work on fabrication sites. Furthermore, the programme connects improvement method to offshore delivery through value stream labs, Last Planner workshops, and offshore installation simulations.

Improved Lean Project Management Practices for Offshore and Marine Developments Course Objectives

- Define Lean thinking and its application to offshore project delivery.
- Identify the eight wastes across engineering, fabrication, and installation.
- Apply value stream mapping to fabrication yard processes.
- Apply the Last Planner System with weekly work planning.
- Measure and improve Percent Plan Complete.
- Apply takt time and line-of-balance scheduling to fabrication.
- Identify bottlenecks using the Theory of Constraints.
- Apply earned value management with SPI, CPI, and TCPI.
- Quantify offshore schedule risk with Monte Carlo analysis and weather windows.
- Apply 5S, standard work, and continuous improvement on site.

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Course Methodology

- Interactive workshops using real offshore project and yard data.
- Value stream mapping and waste walk labs.
- Last Planner and weekly planning exercises.
- Takt time and line-of-balance scheduling workshops.
- Offshore installation, weather window, and risk simulations.

Who Should Take This Course

- Offshore and marine project managers.
- Fabrication yard planners and production engineers.
- Offshore installation and marine operations engineers.
- Lean and continuous improvement practitioners.
- Project control specialists in offshore projects.
- HSE and quality professionals in fabrication.
- Consultants supporting offshore delivery improvement.

Improved Lean Project Management Practices for Offshore and Marine Developments Course Outlines

Day 1: Lean Foundations in Offshore Delivery

- Lean thinking and its origin in manufacturing and construction.
- The eight wastes applied to offshore engineering and fabrication.
- Value versus non-value-adding activity in offshore projects.
- Value stream mapping for fabrication yards and marine bases.

- Offshore project life cycle: engineering, procurement, fabrication, installation, commissioning.
- Common failures: over-fabrication, waiting on engineering, rework loops.
- Building the Lean foundations pack.

Day 2: Planning Systems and Last Planner

- The Last Planner System and its five levels of planning.
- Should-can-will logic and constraint removal.
- Weekly work planning and commitment reliability.
- Percent Plan Complete measurement and analysis.
- Reasons for non-completion analysis and corrective action.
- Collaborative planning with contractors and yards.
- Building the Last Planner pack.

Day 3: Flow, Takt, and Bottleneck Management

- Takt time and line-of-balance scheduling for fabrication.
- Work sequencing for continuous flow across workstations.
- Little's Law applied to fabrication work in progress.
- Theory of Constraints and yard bottleneck identification.
- Drum-buffer-rope and buffer sizing in fabrication yards.
- Batch size reduction and one-piece flow feasibility.
- Building the flow and bottleneck pack.

Day 4: Cost, Risk, and Offshore Execution Control

- AACE International cost estimate classes for offshore modules.

- Earned value management with SPI, CPI, and TCPI.
- Monte Carlo schedule risk analysis with weather windows.
- Installation vessel availability and marine spread constraints.
- Offshore HSE regulation, permit-to-work, and SIMOPS basics.
- Interface management between yards, vessels, and installations.
- Building the offshore control pack.

Day 5: Standard Work, Quality, and Continuous Improvement

- 5S and workplace organisation on fabrication sites.
- Standard work and visual management for offshore delivery.
- Quality at source, first-time-right, and rework reduction.
- Kaizen events and rapid improvement cycles.
- Measuring Lean maturity and sustaining gains.
- Preventing gaming: hidden rework and reporting distortion.
- Personal action plan and continuous improvement.

Conclusion

By successfully completing Improved Lean Project Management Practices for Offshore and Marine Developments, participants will have acquired a practical command of Lean waste elimination, value stream mapping, Last Planner planning, takt and line-of-balance scheduling, bottleneck management, offshore cost and risk control, and standard work practice. They will know how to remove the waiting and rework that cost offshore projects their schedule, measure planning reliability with Percent Plan Complete, and plan installation around real weather windows rather than optimistic ones. In addition, the course prepares delegates to sustain improvement through standard work and visual management. As a result, they return to work ready to run offshore delivery with less waste and more reliable promises. Gentex Training Center delivers this Training Course with a practical, standards-based approach.

FAQs for the Improved Lean Project Management Practices for Offshore and Marine Developments course

Q1 What is the "Improved Lean Project Management Practices for Offshore and Marine Developments" course about?

It is a five-day programme on removing waste from offshore engineering, fabrication, and installation while keeping safety and quality intact. It covers the eight wastes of Lean, value stream mapping for fabrication yards, the Last Planner System with Percent Plan Complete, takt time and line-of-balance scheduling, Theory of Constraints bottleneck management, earned value control, Monte Carlo weather window analysis, and 5S and standard work.

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Q2 What are the key benefits of the "Improved Lean Project Management Practices for Offshore and Marine Developments" course?

Participants gain the ability to remove the waiting and rework that cost offshore projects their schedule, measure planning reliability with Percent Plan Complete, and plan installation around real weather windows rather than optimistic ones. They also learn to sustain improvement through standard work and visual management.

Q3 What skills will I gain from the "Improved Lean Project Management Practices for Offshore and Marine Developments" course?

Lean foundations with eight waste identification, value stream mapping for fabrication yards, and offshore life cycle analysis, planning systems work with Last Planner implementation, should-can-will logic application, constraint removal, weekly work planning, Percent Plan Complete measurement, and non-completion reason analysis, and flow, cost and offshore control with takt time and line-of-balance scheduling, Little's Law application, Theory of Constraints bottleneck identification, drum-buffer-rope application, batch size reduction, AACE estimate class application, earned value interpretation with SPI, CPI and TCPI, Monte Carlo schedule risk analysis with weather windows, installation vessel constraint assessment, offshore HSE regulation application, SIMOPS awareness, interface management, 5S implementation, standard work development, visual management design, quality at source practice, Kaizen facilitation, Lean maturity assessment, and anti-gaming practice.

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Q4 What tools, methods, or standards are covered in the "Improved Lean Project Management Practices for Offshore and Marine Developments" course?

The course covers Lean thinking and its origin in manufacturing and construction, the eight wastes applied to offshore engineering and fabrication, value versus non-value-adding activity, value stream mapping for fabrication yards and marine bases, the offshore project life cycle across engineering, procurement, fabrication, installation and commissioning, common failures across over-fabrication, waiting on engineering and rework loops, the Last Planner System and its five levels of planning, should-can-will logic and constraint removal, weekly work planning and commitment reliability, Percent Plan Complete measurement and analysis, reasons for non-completion analysis and corrective action, collaborative planning with contractors and yards, takt time and line-of-balance scheduling for fabrication, work sequencing for continuous flow across workstations, Little's Law applied to fabrication work in progress, the Theory of Constraints and yard bottleneck identification, drum-buffer-rope and buffer sizing in fabrication yards, batch size reduction and one-piece flow feasibility, AACE International cost estimate classes for offshore modules, earned value management with SPI, CPI and TCPI, Monte Carlo schedule risk analysis with weather windows, installation vessel availability and marine spread constraints, offshore HSE regulation, permit-to-work and SIMOPS basics, interface management between yards, vessels and installations, 5S and workplace organisation on fabrication sites, standard work and visual management for offshore delivery, quality at source, first-time-right and rework reduction, Kaizen events and rapid improvement cycles, measuring Lean maturity and sustaining gains, and preventing gaming across hidden rework and reporting distortion.

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Q5 How is the "Improved Lean Project Management Practices for Offshore and Marine Developments" course applied in real-world practice?

Delegates apply it through Lean foundations packs, eight waste registers, waste walk records, value stream maps, current and future state analyses, takt time calculations, offshore life cycle maps, Last Planner implementation plans, phase plans, look-ahead plans, weekly work plans, commitment registers, constraint logs, Percent Plan Complete charts, non-completion reason Pareto charts, corrective action logs, collaborative planning records, line-of-balance schedules, workstation flow analyses, work in progress reports, Little's Law models, constraint analyses, bottleneck reports, drum-buffer-rope plans, buffer sizing records, batch reduction plans, estimate class assessments, earned value reports, SPI and CPI calculations, TCPI models, Monte Carlo weather window simulations, weather downtime allowances, installation vessel schedules, marine spread plans, SIMOPS assessments, permit-to-work procedures, interface registers, 5S audit records, standard work documents, visual management boards, quality at source checklists, first-time-right reports, rework logs, Kaizen event plans, Lean maturity assessments, anti-gaming checklists, and offshore improvement plans. They also use them to chair weekly planning meetings at the yard and to present offshore delivery performance to project and operations leadership.