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COURSE BROCHURE

AI for Process Optimisation Training Course

21 – 25 December 2026
Singapore

AI for Process Optimisation Training Course

Ref: 18_469 **Date:** 21 – 25 December 2026 **Location:** Singapore **Fees:** 9300 GBP

AI for Process Optimisation is a 1-week training course for operations managers, process improvement leads and continuous improvement specialists, who leave with a process optimisation roadmap targeting cycle-time and cost gains in one value stream. Event logs and machine learning now reveal where work stalls, so organisations can redesign flows on evidence. Jupiter Prime Training runs this course on AI for process optimisation for the people who own operational flow.

Why AI for Process Optimisation Matters Now

Three forces shape AI for process optimisation today: event data captured by enterprise systems, machine learning models that forecast queues, and automation platforms that change workflows quickly. Organisations that combine these with sound improvement discipline shorten lead times, release capacity and stabilise service levels; those that automate a broken flow simply make errors faster and harden waste into software. Examples come from order-to-cash operations in distribution and patient flow in hospitals. The course builds on Lean improvement thinking and treats AI risk with ISO/IEC 42001 for AI management systems and the NIST AI Risk Management Framework AI RMF.

Who Gains Most from AI for Process Optimisation

- Operations managers accountable for throughput, cycle time and unit cost
- Process improvement leads who run Lean or kaizen initiatives
- Continuous improvement specialists who map processes and sustain gains
- Shared service heads responsible for high-volume transactional processes
- Business process owners who approve redesigns and automation

The strongest results come when a process owner, an improvement lead and an operations manager from one value stream attend together.

AI for Process Optimisation Capabilities

Participants learn to read event logs, locate the real constraint, forecast congestion and choose automation that removes waste rather than hiding it.

- Analyse event logs with process mining to reveal rework loops and variants — process owners
- Detect bottlenecks and waiting time using conformance and throughput analytics — operations managers
- Build predictive scheduling and demand forecasts to balance capacity across shifts — planning leads
- Specify automation candidates with clear exception rules — automation sponsors
- Calculate cycle-time and cost baselines and the benefit case for each redesign — finance partners

- Communicate a sequenced process optimisation roadmap with owners and measures — the operations leadership team

Key AI for Process Optimisation Terms

- Process Mining — reconstructing how a process really runs from timestamped event logs held in enterprise systems.
- Event Log — a record of cases, activities and timestamps that process mining tools use as raw material.
- Bottleneck — the step whose limited capacity sets the throughput of the whole process.
- Cycle Time — the elapsed time for one case to pass from the start to the end of a process.
- Intelligent Process Automation — combining rule-based robots with machine learning so software can handle tasks involving judgement or unstructured inputs.
- Conformance Checking — comparing the actual process paths in an event log against the intended process model.

AI for Process Optimisation Day by Day

Day 1: Process Performance and the AI Opportunity

- Value Stream Mapping Refresher — Where Waste Hides in Current Flows
- Lean Improvement Foundations — Linking Waste Removal to AI Methods
- Process Performance Indicators — Cycle Time, Throughput and First-Pass Yield
- AI Technique Landscape for Operations — Mining, Prediction and Automation
- Opportunity Scoring Grid — Selecting Value Streams for Analysis

Day 2: Process Mining and Bottleneck Discovery

- Event Log Extraction and Preparation — Case IDs, Activities and Timestamps
- Process Discovery Algorithms — Revealing Actual Variants and Rework Loops
- Conformance Checking — Gaps Between Designed and Real Process Paths
- Waiting Time and Handover Analytics — Locating the True Constraint
- Root Cause Drill-Down With Attribute Analysis — Which Factors Drive Delay

Day 3: Predictive Analytics for Flow and Scheduling

- Demand and Arrival Forecasting Models — Staffing and Capacity Choices
- Predictive Scheduling and Sequencing — Reducing Queues and Idle Time
- Delay and Breach Prediction — Early Intervention on At-Risk Cases
- Simulation and What-If Testing — Comparing Redesign Options Before Change
- Model Accuracy and Drift Monitoring — When Forecasts Stop Being Trusted

Day 4: Intelligent Automation and Process Redesign

- Automation Candidate Assessment — Volume, Stability and Rule Clarity
- Robotic and Intelligent Process Automation Patterns — Bots, Models and Humans
- Document and Email Understanding With Machine Learning — Unstructured Input Handling
- Exception Handling and Human Review Points — Controlling Automated Decisions
- ISO/IEC 42001 and NIST AI RMF Controls — Managing Automation Risk

Day 5: Practising the Process Optimisation Roadmap

- Bottleneck Diagnosis for a Chosen Value Stream — Applying Process Mining
- Capacity and Scheduling Scenario — Applying Predictive Forecasts
- Automation Shortlist With Control Points — Applying Candidate Assessment
- Benefit Case and Measurement Plan — Cycle-Time and Cost Targets
- Process Optimisation Roadmap — Presentation to Operations Leadership

Applying AI for Process Optimisation After the Course

- Extract an event log for one high-volume process and agree its main bottleneck with the process owner
- Score five repetitive tasks for automation and define exception rules for the top one

AI for Process Optimisation Questions FAQ

What is AI for process optimisation and why does it matter now?

AI for process optimisation uses process mining, prediction and intelligent automation to find and remove delay, rework and cost in workflows. It matters now because enterprise systems already hold the event data needed to redesign processes on evidence.

Which roles gain most from AI for process optimisation training?

Operations managers, improvement leads, shared service heads and process owners gain most. They are accountable for flow, cost and service levels and decide which redesigns go ahead.

How does AI for process optimisation training differ from a general Lean improvement course?

It adds event log analytics, predictive models and intelligent automation to classic improvement methods, so you locate constraints and test redesigns with data and simulation rather than manual sampling alone.

What do you bring back from AI for process optimisation training?

You bring back a process optimisation roadmap for one value stream. It sets the diagnosed bottleneck, scheduling and automation options, control points, cycle-time and cost targets, and the measures operations leadership will track.

AI for Process Optimisation: The Way Forward

The process optimisation roadmap first informs which bottleneck in the chosen value stream receives attention and which automation candidates proceed. Process owners, improvement leads and operations managers use it to sequence changes and measure cycle-time gains. After the first redesign goes live, revisit the event log analysis, since removing one constraint usually moves the bottleneck to another step.