



PROCUREMENT AND SUPPLY CHAIN MANAGEMENT | PSCM-027

AI-Powered Procurement & Logistics: Optimizing Supply Chain Operations

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Course content

Why Attend

Procurement and logistics functions must balance cost efficiency, supplier reliability, inventory availability, transportation performance, and customer service in increasingly complex supply networks. Traditional planning methods often struggle to respond quickly to fluctuating demand, supplier disruptions, transportation delays, and large volumes of operational data.

Artificial intelligence provides opportunities to improve these decisions through predictive analytics, machine learning, intelligent automation, and advanced optimisation techniques. AI-enabled procurement and logistics solutions can help organisations forecast demand, evaluate suppliers, identify purchasing risks, optimise inventory levels, improve transportation planning, and detect operational exceptions before they develop into significant disruptions.

Course Methodology

- The programme combines instructor-led discussions, AI application demonstrations, procurement and logistics case studies, data analysis exercises, process mapping, scenario simulations, and practical improvement workshops.
- Participants examine realistic supply chain datasets and business scenarios involving purchasing expenditure, supplier performance, inventory movements, warehouse operations, and transportation activities. Exercises demonstrate how AI-supported analysis can improve decision-making while addressing data quality, model reliability, cybersecurity, and operational integration requirements.

Course Objectives

- Understand the applications and limitations of artificial intelligence in procurement and logistics
- Identify high-value AI use cases across sourcing, purchasing, warehousing, and transportation
- Apply predictive analytics concepts to demand forecasting and inventory planning
- Evaluate AI-supported supplier selection, performance monitoring, and risk assessment
- Identify opportunities for intelligent procurement automation
- Understand AI applications in warehouse operations and inventory optimisation

Course content

Target Audience

- This course is suitable for:
- Procurement and purchasing managers
- Supply chain managers and directors
- Logistics and transportation managers

Course outline

Detailed course outline

Day-by-day outline for AI-Powered Procurement & Logistics: Optimizing Supply Chain Operations.

Day 1 - Artificial Intelligence Foundations for Procurement and Supply Chain Operations

- 09:00-09:39 | Understanding artificial intelligence, machine learning, predictive analytics, generative AI, and intelligent automation in procurement and logistics environments
- 09:39-10:18 | Mapping AI opportunities across strategic sourcing, supplier management, purchasing, inventory planning, warehousing, transportation, and distribution
- 10:18-10:57 | Identifying operational data sources from ERP, procurement platforms, warehouse management systems, transportation systems, and supplier records
- 10:57-11:00 | Evaluating data quality, information integration, process maturity, and organisational readiness for AI adoption
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Evaluating data quality, information integration, process maturity, and organisational readiness for AI adoption (continued)
- 12:05-12:43 | Prioritising AI use cases according to business value, implementation complexity, operational risk, and available data
- 12:43-14:00 | Practical workshop: Developing an AI opportunity map for a procurement and logistics operation with defined improvement objectives and priority use cases

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Day 2 - AI-Powered Procurement, Supplier Analytics and Purchasing Automation

- 09:00-09:39 | Applying AI-supported spend analysis to identify purchasing patterns, expenditure concentration, price anomalies, and sourcing opportunities
- 09:39-10:18 | Using predictive analytics to evaluate supplier reliability, delivery performance, financial exposure, and potential supply disruption indicators
- 10:18-10:57 | Exploring AI-assisted supplier discovery, qualification, bid evaluation, and commercial comparison processes
- 10:57-11:00 | Applying generative AI to procurement documentation, requests for proposal, supplier communication, and contract information analysis
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Applying generative AI to procurement documentation, requests for proposal, supplier communication, and contract information analysis (continued)
- 12:05-12:43 | Identifying automation opportunities in purchase requisitions, purchase order processing, invoice verification, and procurement exception management
- 12:43-14:00 | Practical exercise: Analysing supplier and procurement data to develop an AI-supported sourcing and supplier performance improvement plan

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Day 3 - Predictive Demand Planning, Inventory Optimisation and Intelligent Warehousing

- 09:00-09:39 | Applying machine learning concepts to demand forecasting using historical sales, seasonality, promotional activity, and external demand indicators
- 09:39-10:18 | Evaluating inventory optimisation techniques for safety stock, reorder points, replenishment planning, and service-level management
- 10:18-10:57 | Using predictive analytics to identify stockout risks, slow-moving inventory, excess stock, and changing inventory requirements
- 10:57-11:00 | Exploring AI applications in warehouse slotting, order picking, labour planning, capacity management, and operational productivity
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Exploring AI applications in warehouse slotting, order picking, labour planning, capacity management, and operational productivity (continued)
- 12:05-12:43 | Understanding intelligent warehouse technologies including computer vision, autonomous mobile robots, sensors, and warehouse analytics
- 12:43-14:00 | Practical workshop: Developing an AI-supported inventory and warehouse improvement scenario to balance stock availability, operating cost, and service performance

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Day 4 - Intelligent Transportation, Logistics Optimisation and Supply Chain Resilience

- 09:00-09:34 | Understanding AI applications in transportation planning, vehicle routing, load optimisation, shipment consolidation, and carrier selection
- 09:34-10:08 | Applying predictive estimated time of arrival analysis and shipment visibility data to identify delivery risks and operational exceptions
- 10:08-10:42 | Evaluating AI-enabled last-mile delivery planning, distribution scheduling, and transportation cost optimisation
- 10:42-11:00 | Using supply chain analytics to identify supplier disruptions, port congestion, transportation delays, and capacity constraints
- 11:00-11:30 | Coffee break
- 11:30-11:46 | Using supply chain analytics to identify supplier disruptions, port congestion, transportation delays, and capacity constraints (continued)
- 11:46-12:53 | Developing scenario-based responses to logistics disruptions through alternative sourcing, rerouting, inventory repositioning, and contingency planning
- 12:53-14:00 | Case study: Evaluating transportation and distribution data to improve delivery reliability, reduce logistics costs, and strengthen supply chain resilience

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Day 5 - AI Implementation, Governance and Supply Chain Performance Improvement

- 09:00-10:07 | Developing an AI implementation strategy covering business requirements, use-case selection, data preparation, technology evaluation, and operational integration
- 10:07-10:41 | Assessing AI solution providers and integration requirements involving ERP, procurement systems, WMS, TMS, and supply chain analytics platforms
- 10:41-11:00 | Establishing governance controls for data privacy, cybersecurity, model accuracy, explainability, supplier information, and human oversight
- 11:00-11:30 | Coffee break
- 11:30-11:45 | Establishing governance controls for data privacy, cybersecurity, model accuracy, explainability, supplier information, and human oversight (continued)
- 11:45-12:19 | Defining performance indicators covering procurement savings, supplier reliability, forecast accuracy, inventory turnover, transportation cost, and on-time delivery
- 12:19-12:53 | Managing organisational change, workforce capabilities, pilot implementation, stakeholder engagement, and continuous model monitoring
- 12:53-14:00 | Capstone exercise: Developing and presenting an AI-Powered Procurement and Logistics Transformation Roadmap covering priority applications, data requirements, expected benefits, implementation risks, governance controls, and measurable performance outcomes

Seminar dates

Available seminar dates

Live dates and pricing for AI-Powered Procurement & Logistics: Optimizing Supply Chain Operations generated from the course details page.

Date	Location	Format	Fee
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No seminar dates are currently available.