



PROCUREMENT AND SUPPLY CHAIN MANAGEMENT

Artificial Intelligence (AI) in Warehouse Operations & Optimization

Course code: PSCM-017

SPARK TRAINING

Professional training courses for leaders, specialists, and organizations seeking practical capability development.

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— Workshop Overview

The integration of Artificial Intelligence into warehouse operations is transforming how organizations manage inventory, optimize resources, and improve operational efficiency. This course provides participants with practical knowledge and modern approaches for utilizing AI technologies to improve warehouse performance, enhance decision-making, reduce operational costs, and support smart warehouse transformation initiatives.

Why Attend

The course combines practical workshops, case studies, interactive discussions, simulations, demonstrations of AI applications, analytical exercises, and real-world warehouse scenarios to ensure practical understanding and implementation.

Who Should Attend

Warehouse managers and supervisors
Supply chain and logistics professionals
Inventory and materials managers
Operations managers
Distribution and fulfillment specialists
Warehouse planners and analysts
Professionals involved in digital transformation

— Learning Objectives

- Understand the role of AI in modern warehouse operations
- Apply AI concepts to inventory and warehouse optimization processes
- Improve forecasting and inventory planning effectiveness
- Enhance warehouse layout, picking, and fulfillment efficiency
- Utilize AI for workforce planning and predictive maintenance
- Integrate AI technologies with warehouse systems and operations
- Measure performance improvements and develop implementation strategies

Course Outline

**DAY
1**

Introduction to AI and Smart Warehouse Foundations

- Understanding warehouse operations and common operational challenges
- Exploring the fundamentals of artificial intelligence and machine learning concepts
- Understanding the importance of data in intelligent warehouse decisions
- Reviewing warehouse data sources and quality requirements
- Understanding the capabilities of AI-supported warehouse management systems
- Reviewing practical examples of AI applications within warehouse environments

**DAY
2**

AI Applications in Inventory Management and Demand Planning

- Understanding inventory planning challenges and inventory cost factors
- Exploring AI-supported forecasting techniques and predictive models
- Optimizing inventory levels and stock availability strategies
- Reducing excess inventory, shortages, and non-moving stock risks
- Aligning inventory forecasts with purchasing and replenishment activities
- Applying practical inventory optimization exercises and scenarios

**DAY
3**

Warehouse Process Optimization and Order Management

- Improving warehouse layout and storage allocation strategies using intelligent methods
- Enhancing picking processes and route efficiency through AI-supported techniques
- Optimizing order processing, sequencing, and workload distribution
- Improving order accuracy and customer fulfillment performance
- Increasing operational visibility through real-time information systems
- Understanding simulation approaches and digital warehouse modeling concepts

**DAY
4**

Workforce Performance and Asset Optimization

- Applying AI approaches for workforce planning and productivity analysis
- Improving workforce scheduling and operational performance management
- Understanding predictive maintenance methods for warehouse equipment
- Reducing equipment failures and maintenance-related disruptions
- Enhancing workplace safety through intelligent monitoring systems
- Supporting workforce adaptation and change management initiatives

DAY
5

AI Strategy and Smart Warehouse Transformation

- Integrating AI solutions with warehouse technologies and enterprise systems
- Understanding governance, cybersecurity, and ethical considerations related to AI implementation
- Measuring operational improvements and evaluating return on investment
- Developing implementation strategies for warehouse transformation initiatives
- Managing implementation risks and operational challenges
- Practical workshop: Building a smart warehouse optimization and transformation model

— Upcoming Classroom Dates

DATE	LOCATION	FEE
5 - 9 October 2026	Barcelona - Spain	€1,925
12 - 16 October 2026	Munich - Germany	€2,125
9 - 13 November 2026	London - United Kingdom	€2,100
16 - 20 November 2026	Munich - Germany	€2,125
7 - 11 December 2026	Madrid - Spain	€2,125
14 - 18 December 2026	Geneva - Switzerland	€2,625
21 - 25 December 2026	Istanbul - Türkiye	€1,725
4 - 8 January 2027	Kuala Lumpur - Malaysia	€1,400

— Certificate and Registration

Participants who attend and complete the full programme receive a SPARK Training Certificate of Completion. For registration, in-house delivery, or availability questions, contact info@sparktraining.eu or +31 85 115 0004.