

Artificial Intelligence (AI) for Operational Excellence & Process Optimisation

Course code: LM-001



SPARK TRAINING

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

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— Workshop Overview

This Artificial Intelligence (AI) for Operational Excellence & Process Optimisation training course equips professionals with the skills to harness artificial intelligence to drive efficiency, quality, and sustainable operational performance. In today's data-driven business landscape, AI has become a strategic enabler, helping organizations reduce risks, accelerate improvement initiatives, and make smarter decisions. This course provides a practical, business-focused approach for leaders to integrate AI into operational frameworks without requiring deep technical expertise. Participants will learn how AI enhances traditional optimisation methodologies, such as Lean, Six Sigma, and business process re-engineering. Through hands-on exercises and real-world examples, delegates explore how AI can improve visibility across processes, detect inefficiencies in real time, and provide predictive insights for better decision-making. The course also emphasizes responsible adoption, governance, and cultural readiness, ensuring that AI initiatives align with organizational priorities. By the end of the training, participants will be able to champion AI-driven operational improvements that deliver measurable and sustainable business value. By the end of this Artificial Intelligence (AI) for Operational Excellence & Process Optimisation training course, participants will be able to:

- Understand how AI complements operational excellence frameworks and optimisation methods.
- Identify processes suitable for AI-driven analysis, automation, and performance enhancement.
- Apply AI tools to examine workflows, detect inefficiencies, and determine root causes.
- Strengthen quality, performance, and cost-control initiatives using AI insights.
- Integrate AI with Lean, Six Sigma, and continuous improvement strategies.
- Lead and govern AI-enabled operational change responsibly and sustainably.
- Design improvement strategies that align AI adoption with measurable business outcomes.
- Build organizational readiness for AI-driven operational excellence initiatives.

This course ensures participants gain a balanced perspective on AI strategy, practical applications, and leadership responsibilities, empowering them to achieve operational improvements that are both effective and sustainable. This training course is designed for professionals seeking to improve operational performance through intelligent technologies. It is suitable for both technical and non-technical leaders responsible for process improvement, operational efficiency, and transformation initiatives. This Artificial Intelligence (AI) for Operational Excellence & Process Optimisation training course is particularly beneficial for:

- Operations and production managers seeking efficiency and cost reduction
- Leaders in operational excellence and continuous improvement
- Process owners, analysts, and workflow optimisation specialists
- Quality and performance management professionals
- Supply chain, logistics, and service operations teams
- Digital transformation and operational strategy leaders
- Managers responsible for driving automation, productivity, and performance initiatives

This course empowers professionals to leverage AI strategically, making their operations more efficient, agile, and resilient. The Artificial Intelligence (AI) for Operational Excellence & Process Optimisation training course uses an interactive, structured learning approach that blends expert instruction, practical exercises, and collaborative discussion. This ensures participants gain a clear understanding of AI concepts while learning how to apply them in real-world operational contexts. Training methods include:

- Instructor-led presentations covering AI fundamentals, operational frameworks, and optimisation models.
- Case studies and group discussions showcasing successful AI applications across industries.
- Practical exercises to analyse workflows, identify opportunities, and interpret AI-generated insights.
- Scenario-based activities connecting AI capabilities with measurable business outcomes.
- Reflection and feedback sessions to support individual and organisational AI integration plans.

By combining theory with applied learning, participants leave with actionable knowledge and confidence to implement AI-enabled operational excellence initiatives within their teams.

Learning Objectives

- Overview of Operational Excellence and Process Optimisation Key challenges in traditional process improvement approaches Introduction to Artificial Intelligence and its business applications AI vs Automation vs Digital Transformation AI technologies relevant to operations (ML, NLP, RPA, Predictive Analytics) Linking AI with Lean, Six Sigma, and Business Process Management (BPM) Case examples of AI-driven operational excellence Day 2: AI-Driven Process Analysis and Optimisation Identifying and prioritising processes for AI implementation Process mapping and value stream analysis in an AI context Introduction to process mining and intelligent process discovery Using AI to detect bottlenecks, inefficiencies, and root causes AI-based performance measurement and KPI optimisation Data requirements and quality considerations for AI-enabled processes Practical examples of AI-supported process optimisation Day 3: Intelligent Automation and Workflow Optimisation From rule-based automation to intelligent automation Robotic Process Automation (RPA) enhanced with AI Automating complex and judgment-based processes using AI AI for demand forecasting, scheduling, and capacity planning Optimising workflows across departments and functions Reducing operational costs and cycle times using AI Risks, limitations, and governance of intelligent automation Day 4: Predictive, Prescriptive, and Real-Time Operations
- Predictive analytics for operational decision-making AI-enabled forecasting and scenario analysis Prescriptive analytics for process and resource optimisation Real-time monitoring and AI-driven operational dashboards AI for quality improvement, defect reduction, and reliability Managing change and workforce adoption of AI-enabled operations Ethical considerations and responsible AI in operations Day 5 : Implementing AI for Sustainable Operational Excellence
- Designing an AI-enabled operational excellence framework Building the business case for AI in operations AI implementation roadmap: strategy, pilots, and scaling Selecting AI tools and vendors for operational optimisation Measuring ROI and long-term performance impact Governance, risk management, and AI compliance considerations Developing an actionable AI adoption plan for participants' organizations

— Course Outline

**DAY
1**

Foundations of AI and Operational Excellence

- Overview of Operational Excellence and Process Optimisation Key challenges in traditional process improvement approaches Introduction to Artificial Intelligence and its business applications AI vs Automation vs Digital Transformation AI technologies relevant to operations (ML, NLP, RPA, Predictive Analytics) Linking AI with Lean, Six Sigma, and Business Process Management (BPM) Case examples of AI-driven operational excellence
Day 2: AI-Driven Process Analysis and Optimisation Identifying and prioritising processes for AI implementation Process mapping and value stream analysis in an AI context Introduction to process mining and intelligent process discovery Using AI to detect bottlenecks, inefficiencies, and root causes AI-based performance measurement and KPI optimisation Data requirements and quality considerations for AI-enabled processes Practical examples of AI-supported process optimisation
Day 3: Intelligent Automation and Workflow Optimisation From rule-based automation to intelligent automation Robotic Process Automation (RPA) enhanced with AI Automating complex and judgment-based processes using AI AI for demand forecasting, scheduling, and capacity planning Optimising workflows across departments and functions Reducing operational costs and cycle times using AI Risks, limitations, and governance of intelligent automation
Day 4: Predictive, Prescriptive, and Real-Time Operations
- Predictive analytics for operational decision-making AI-enabled forecasting and scenario analysis Prescriptive analytics for process and resource optimisation Real-time monitoring and AI-driven operational dashboards AI for quality improvement, defect reduction, and reliability Managing change and workforce adoption of AI-enabled operations Ethical considerations and responsible AI in operations
Day 5 : Implementing AI for Sustainable Operational Excellence
- Designing an AI-enabled operational excellence framework Building the business case for AI in operations AI implementation roadmap: strategy, pilots, and scaling Selecting AI tools and vendors for operational optimisation Measuring ROI and long-term performance impact Governance, risk management, and AI compliance considerations Developing an actionable AI adoption plan for participants' organizations

— Upcoming Classroom Dates

DATE	LOCATION	FEE
5 - 9 October 2026	Istanbul - Türkiye	€1,425
16 - 20 November 2026	Vienna - Austria	€2,125
7 - 11 December 2026	Barcelona - Spain	€1,925
11 - 15 January 2027	Rome - Italy	€2,125
8 - 12 February 2027	Geneva - Switzerland	€2,625
8 - 12 March 2027	Amsterdam - Netherlands	€2,125
12 - 16 April 2027	Cape Town - South Africa	€1,420
10 - 14 May 2027	Istanbul - Türkiye	€1,425

— 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.