

QUALITY AND PRODUCTIVITY | QP-025

Artificial Intelligence in Quality Management and Inspection

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Course content

Why Attend

Artificial intelligence is enabling new approaches to quality management, from computer vision inspection to analysing complaints and predicting defects before they occur. Quality professionals need to understand where AI adds value and how to control its risks.

This Aractech course explains AI and machine learning concepts for quality professionals, applications in inspection, process monitoring, root cause analysis, supplier quality and document management, generative AI for quality work, validation and governance of AI tools, and implementation planning.

Course Methodology

- Concept sessions
- Demonstrations
- Case studies
- Use-case workshops
- Governance discussions

Course Objectives

- Explain AI concepts relevant to quality management
- Identify AI use cases across quality processes
- Understand AI-based visual inspection
- Use generative AI responsibly for quality tasks
- Validate and govern AI tools in quality systems
- Plan AI implementation in quality functions

Target Audience

- Quality managers and engineers

Course content

- Inspection supervisors
- Continuous improvement professionals
- Regulated industry quality staff

Course outline

Detailed course outline

Day-by-day outline for Artificial Intelligence in Quality Management and Inspection.

Day 1 - AI for Quality Professionals

- 09:00-09:39 | AI and machine learning basics
- 09:39-10:18 | Data in quality
- 10:18-10:57 | Opportunities
- 10:57-11:00 | Risks
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Risks (continued)
- 12:05-12:43 | Market overview
- 12:43-14:00 | Exercise: Quality data inventory

Day 2 - AI in Inspection

- 09:00-09:39 | Computer vision
- 09:39-10:18 | Defect detection
- 10:18-10:57 | Training data
- 10:57-11:00 | Accuracy and false rejects
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Accuracy and false rejects (continued)
- 12:05-12:43 | Deployment
- 12:43-14:00 | Case study: AI visual inspection

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Day 3 - AI in Process and Supplier Quality

- 09:00-09:39 | Process monitoring
- 09:39-10:18 | Predictive quality
- 10:18-10:57 | Root cause analytics
- 10:57-11:00 | Supplier risk analytics
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Supplier risk analytics (continued)
- 12:05-12:43 | Complaint analysis
- 12:43-14:00 | Exercise: Use-case scoring

Day 4 - Generative AI for Quality Work

- 09:00-09:39 | Drafting procedures
- 09:39-10:18 | Summarising investigations
- 10:18-10:57 | Audit preparation
- 10:57-11:00 | Prompt practices
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Prompt practices (continued)
- 12:05-12:43 | Data protection
- 12:43-14:00 | Lab: Generative AI tasks

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Day 5 - Validation and Implementation

- 09:00-09:45 | Validating AI tools
- 09:45-10:30 | Governance
- 10:30-11:00 | Regulatory expectations
- 11:00-11:30 | Coffee break
- 11:30-11:45 | Regulatory expectations (continued)
- 11:45-12:30 | Change management
- 12:30-13:15 | Roadmap
- 13:15-14:00 | Capstone: AI quality use-case proposal

Seminar dates

Available seminar dates

Live dates and pricing for Artificial Intelligence in Quality Management and Inspection generated from the course details page.

Date	Location	Format	Fee
25 - 29 January 2027	Amsterdam	Classroom	€2,830
22 - 26 February 2027	London	Classroom	€2,315
22 - 26 March 2027	Istanbul	Classroom	€1,978
26 - 30 April 2027	Vienna	Classroom	€3,225
24 - 28 May 2027	Barcelona	Classroom	€2,815
28 June - 2 July 2027	Paris	Classroom	€3,825
26 - 30 July 2027	Frankfurt	Classroom	€1,875
23 - 27 August 2027	Barcelona	Classroom	€2,815
27 September - 1 October 2027	Amsterdam	Classroom	€2,830
25 - 29 October 2027	London	Classroom	€2,315

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