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COURSE BROCHURE

Connected Maintenance Technologies Training Course

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Registered in the United Kingdom and Saudi Arabia

Connected Maintenance Technologies Training Course

Connected Maintenance Technologies is a 1-week training course for maintenance engineers and technical supervisors who must choose, prove and connect sensors, IIoT gateways, drones and augmented reality to everyday maintenance, and ends with a connected maintenance technology roadmap. Falling sensor costs and a shrinking pool of experienced technicians push plants to watch equipment remotely and guide crews digitally. Jupiter Prime Training runs this course.

Why Connected Maintenance Technologies Matters Now

Three groups shape the choice of connected maintenance technologies today: vendors offering wireless sensors and cloud analytics at lower entry cost, operations leaders who expect fewer surprise failures, and IT and cyber security teams who must approve every device that joins the plant network. Plants that select tools against real failure modes gain earlier warning, safer inspections and better use of scarce technicians. Plants that buy gadgets without a data path into the work order system collect alarms nobody acts on. The course links technology choices to ISO 55001 for asset management systems and EN 13306 for maintenance terminology.

Who Gains Most from Connected Maintenance Technologies

- Maintenance engineers who select monitoring techniques for critical rotating and static equipment
- Technical supervisors who turn sensor alerts into planned jobs for crews
- Condition monitoring technicians who collect vibration, thermal and ultrasound readings
- Inspection coordinators who plan drone and crawler surveys of hard-to-reach assets
- CMMS administrators who hold asset hierarchies, failure codes and notification rules

A maintenance engineering section gains most when its engineers, supervisors and CMMS administrator attend together.

Connected Maintenance Technologies Capabilities

Participants match each sensing or field technology to a failure mode, a data route and a measurable payback.

- Assess which failure modes suit vibration, thermography, ultrasound or oil analysis — reliability engineering
- Specify wireless sensor and IIoT gateway architectures with cyber controls — IT and security teams
- Weigh drone, crawler and fixed-camera inspection options — inspection planning
- Design alert-to-work-order rules inside the CMMS — maintenance supervisors
- Calculate payback for a technology trial using avoided downtime and labour — budget holders

- Communicate a phased rollout with trial success criteria — plant management

Key Connected Maintenance Technologies Terms

- IIoT gateway — a device that collects readings from field sensors and forwards them securely to plant or cloud systems.
- Condition monitoring — measuring signals such as vibration or temperature to detect developing faults before functional failure.
- Remaining useful life — an estimate of how long an asset can run before a predicted failure needs action.
- Augmented reality work instruction — step-by-step guidance overlaid on equipment through a headset or tablet during a task.
- Alert threshold — the signal level at which a monitoring system raises a warning for review or action.
- Digital inspection record — geotagged images, readings and findings from a survey stored against the asset in the CMMS.

Connected Maintenance Technologies Day by Day

Day 1: Technology Landscape and Failure Fit

- Connected Maintenance Technology Map — Sensing, Inspection and Field Guidance Tools
- Failure Mode to Technique Matrix — Choosing What to Monitor
- ISO 55001 Asset Information Needs — Data Worth Collecting
- EN 13306 Condition-Based Maintenance Terms — Shared Vocabulary Across Teams
- Current Monitoring Coverage Audit — Gaps on Critical Assets

Day 2: Sensors, IIoT and Data Paths

- Wireless Vibration and Temperature Sensors — Placement and Sampling Choices
- Ultrasound and Oil Analysis Kits — Route-Based Versus Continuous Monitoring
- IIoT Gateway Architecture — Edge, Plant Network or Cloud Storage
- Device Cyber Security Controls — Network Segmentation and Patch Ownership
- Alert Threshold Setting — Balancing Early Warning Against Nuisance Alarms

Day 3: Remote Inspection and Field Guidance

- Drone Visual and Thermal Surveys — Flare Stacks, Roofs and Tank Shells
- Crawler and Borescope Inspection — Confined Internals Without Entry
- Augmented Reality Work Instructions — Guiding Less Experienced Technicians
- Remote Expert Video Support — Reducing Specialist Call-Out Travel
- Digital Inspection Records — Linking Images and Findings to Assets

Day 4: Analytics, CMMS Integration and Payback

- Trend and Anomaly Analytics — Reading Remaining Useful Life Estimates
- Alert-to-Work-Order Rules — Automatic Notifications in the CMMS
- Asset Hierarchy and Failure Codes — Making Sensor Data Usable
- Technology Trial Payback Model — Avoided Downtime, Labour and Risk
- Vendor Selection Scorecard — Openness, Support and Data Ownership

Day 5: Practising the Connected Maintenance Technology Roadmap

- Technique Selection for a Sample Asset Group — Applying Day 1 Matrix
- Sensor and Gateway Layout Sketch — Applying Day 2 Architecture
- Inspection Method Choice for Hard-to-Reach Assets — Applying Day 3 Options
- Trial Success Criteria and Scale-Up Gates — Using Day 4 Payback
- Connected Maintenance Technology Roadmap — Phased Rollout for Sponsors

Applying Connected Maintenance Technologies After the Course

- Complete the failure mode to technique matrix for the ten most critical assets in one area and flag monitoring gaps.
- Draft alert-to-work-order rules for one existing sensor set and test them with the CMMS administrator.

Connected Maintenance Technologies Questions FAQ

What are connected maintenance technologies and why do they matter now?

They are sensors, IIoT gateways, drones, analytics and augmented reality tools that watch equipment and guide crews. They matter now because sensors are cheaper and experienced technicians are scarcer, so remote watching and digital guidance fill the gap.

Which roles gain most from connected maintenance technologies?

Maintenance engineers, technical supervisors, condition monitoring technicians, inspection coordinators and CMMS administrators gain most. You benefit if you choose monitoring tools or turn their alerts into work.

How do connected maintenance technologies differ from an AI for maintenance course?

Connected maintenance technologies cover the physical tools and data paths, from sensor placement to drones and CMMS rules. A course on AI for maintenance concentrates on models and algorithms; here analytics is one part of a wider toolset.

What do you bring back from connected maintenance technologies?

You bring back a phased plan for a sample asset group. It holds technique choices, a sensor and gateway layout, inspection methods, trial success criteria and payback figures you can adapt for your site.

Connected Maintenance Technologies: The Way Forward

The connected maintenance technology roadmap first informs which asset group receives a funded trial. Maintenance engineers, supervisors and the CMMS administrator use it to set sensor layouts, alert rules and success criteria. After the first trial, revisit alert thresholds and payback figures against real work orders raised, since they show which tools deserve scale-up.