MERCURY

Big Data for Maintenance Strategies Course

14 – 18 February 2027
Dubai (UAE)



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Ref: 9106_271230 **Date:** 14 – 18 February 2027 **Location:** Dubai (UAE) **Fees:** 4900 Euro

Introduction:

To preserve maintenance data and drive better business decisions, emerging technologies such as Big Data analytics and the Internet of Things IoT, where equipment and machinery connect and exchange data through cloud-based CMMS Computerized Maintenance Management System, can address industrial challenges.

Through the use of IoT and big data technologies, preventive maintenance, predictive maintenance, and life cycle analysis strategies can increase uptimes while reducing operations and maintenance expenditure costs.

Participants attending this big data strategy for predictive maintenance course will gain an understanding of the nature of maintenance failures and be able to identify equipment classifications and patterns through IoT and Big Data reporting.

In this big data strategy for predictive maintenance training, participants can also perform cost optimization through effective measurement, reporting, and analysis through Big Data and understand how Artificial Intelligence can predict maintenance requirements, forecasting trends, and business requirements.

Big Data Analytics for Predictive Maintenance Strategies:

Leveraging Big Data Analytics for Predictive Maintenance Strategies is an advanced step toward minimizing downtime and improving efficiency in the context of a maintenance strategy. By incorporating a robust Data Maintenance Strategy, organizations can anticipate potential faults and perform the necessary actions before they become significant issues.

In this big data strategy for predictive maintenance course, Big Data Strategy and Big Data Predictive Maintenance become keys to unlocking the full potential of maintenance management. Through this course, one can master data maintenance strategies by understanding and applying Big Data in Maintenance for enhanced reliability and performance.

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Targeted Groups:

- Maintenance Managers.
- Maintenance Planners.
- Technicians and Supervisors.
- All Stakeholders in the Maintenance Support Team.
- Maintenance and Reliability Engineers.
- Materials Management.
- Managers and Supervisors, and All CMMS Users.

Course Objectives:

At the end of this big data strategy for predictive maintenance course, the participants will be able to:

- Reduce costs through a planned and controlled process utilizing data from cloud-based Big Data.
- Ensure a team approach to cost optimization, planning, and scheduling throughout the Maintenance and Operations department.
- Create awareness of best practice planning methods and an integrated organizational approach to successful Maintenance Scheduling utilizing cloud-based Internet of Things IoT and Big Data.
- Improve aligned strategy application throughout the asset, reducing downtime through cloud-based IoT and Big Data.
- Develop a clearer understanding of each team member's roles and responsibilities within their CMMS system and procedures.

Targeted Competencies:

At the end of this big data strategy for predictive maintenance training, the target competencies will:

- Big Data Analytics.
- Maintenance Management.
- IoT Optimization.
- Maintenance Strategy Implementation.
- Cost Optimization.

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Understanding the Big Data for Maintenance Strategies:

In the big data strategy for predictive maintenance course, participants will delve into essential concepts surrounding data strategy concerning maintenance strategies. The curriculum comprehensively understands data analytics strategies explicitly tailored for maintenance, including master data maintenance strategies. Participants will learn the significance of predictive maintenance strategies within the context of big data, gaining insights into the principles of big data strategy and its role in enhancing maintenance efficiency.

The big data strategy for predictive maintenance course emphasizes big data analytics for predictive maintenance strategies, highlighting the critical impact of big data on maintenance operations and how to leverage analytics effectively for proactive maintenance approaches. By exploring the intersection of big data and maintenance, participants will develop a nuanced understanding of implementing data-driven strategies to optimize maintenance processes and improve overall asset reliability.

Course Content:

Unit 1: Maintenance Strategies Assignment Using Big Data:

- What is Maintenance and Asset Management using ISO 55000/1/2?
- IoT and CMMS Program Management with ISO 27001 and ISO 14224.

Unit 2: Maintenance Strategies Assignment Using Cloud-based Internet of Things IoT and Big Data:

- Predictive Maintenance PdM.
- Condition Based Maintenance CBM.
- Reliability Centered Maintenance RCM through ISO 55000/1.
- Work Management Process through ISO 9001.

Unit 3: Maintenance Program Management Utilizing IoT and Big Data Information:

- Philosophy of Maintenance and How Cloud-based IoT and Big Data Can Assist.
- Preventive Maintenance and Predictive Maintenance Program Function.
- Cost impact and analysis - how cloud-based IoT and Big Data can assist in reducing costs.
- Maintenance performance evaluation through KPIs using cloud-based IoT and Big Data.
- Proactive Maintenance Utilizing Big Data and Object Code Assignments with ISO 27001 and ISO 14224.

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Unit 4: Implementing Big Data Approaches for Maintenance:

- Life Cycle Costing following Big Data and ISO 14001.
- Root Cause Failure Analysis RCFA following Big Data and ISO 9001.
- Objectives of risk management.
- Increasing Equipment Uptime Utilizing IoT and Big Data.
- Assignment of Organizational Roles and Responsibilities.
- Develop the inspection sheet.

Unit 5: Continuous Improvement with Big Data, IoT, and ISO Standards:

- IoT and Big Data are used for spare parts and material needs.
- Inspection sheet examples.
- Determine the frequency cycle using cloud-based IoT and Big Data.
- Effectiveness of Preventive and Predictive Maintenance PPM.
- Refine and measure PPM using cloud-based IoT and Big Data.
- Utilize IoT and Big Data for equipment failure analysis.
- Quality Assurance and Continuous Improvement Under ISO 9000.