



Digital Transformation and Innovation

## Collecting of Machine Data

## Course Introduction

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Collecting machine data digitally is the first step towards digitizing a whole production process. This is because machine data collection brings transparency to your production processes through automatically collecting and storing information and making this accordingly available. This training program is designed to provide participants with the essential concepts of machine data collection. This training program introduces topics such as MDC systems, software, advantages of collecting machine data and production data acquisition.

## Target Audience

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1. **Data Engineer**
2. **Industrial Engineer**
3. **IoT Specialist**
4. **Automation Engineer**
5. **Manufacturing Engineer**
6. **SCADA Engineer**
7. **Maintenance Manager**
8. **Instrumentation Engineer**
9. **Operations Analyst**
10. **Machine Learning Engineer**

## Learning Objectives

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By the end of the training Program, participants will be able to:

- ✓ Gain a comprehensive understanding of what machine data is and the importance of collecting it in digitizing the production process.

- ✓ Identify the activities involved in machine data collection.
- ✓ Recognize the types and components of machine data.
- ✓ Select the most appropriate system to automate machine data collection.
- ✓ Learn some of the softwares available in the market and the considerations to be taken when choosing MES software.

**Training Program Methodology** The training program is implemented by combining the participants' academic knowledge and practical practice (30% theoretical / 70% practical activities).

This program focuses on exercises, case studies, individual and group presentations, and Role-playing, among other advanced training techniques.

A detailed report is submitted to each participant and the training department in your organization on the results of the participant's performance and the return on training.

## Course Outline

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### • Day 01

- ✓ What does machine data collection (MDC) mean?
- ✓ Machine data collection and production data acquisition.
- ✓ What are the tasks of machine data collection?
- ✓ Recording production quantities.
- ✓ Real-time machine monitoring.
- ✓ Reporting machine malfunctions.
- ✓ Analysing production processes.
- ✓ Analysing the reasons for malfunctions during downtime.
- ✓ What does machine data collection aim to achieve?

### • Day 02

- ✓ What are machine data?
- ✓ Types of Data.
- ✓ Process Data.
- ✓ Product Data.
- ✓ Components of Machine Data.
- ✓ Production volumes Yields, reject quantities.
- ✓ Utilization.
- ✓ Run times.
- ✓ Availability and reliability.
- ✓ Machine status.
- ✓ Practical application.

#### • Day 03

- ✓ Disruptions and downtime.
- ✓ Energy consumption.
- ✓ Advantages of Data Collection.
- ✓ Optimization of machine run times.
- ✓ Increase in machine availability.
- ✓ Reduction in set-up and lead times.
- ✓ Machine utilization overview.
- ✓ Service intervals can be planned better.
- ✓ Recording of quality data. ✓ Practical application.

#### • Day 04

- ✓ How automated machine data collection is carried out?
- ✓ Enterprise Resource Planning system (ERP).
- ✓ Advanced Planning and Scheduling system (APS).

- ✓ Manufacturing Execution System (MES).
- ✓ Reliable machine data collection using the right software.
- ✓ Software available in the market.
- ✓ What you should take into consideration when choosing your MES software?

#### • Day 05

- ✓ Intuitive system operation.
- ✓ Simple visual representation of your machine data.
- ✓ Flexibility of the machine data collection process.
- ✓ Practical application.

## Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
April 14, 2025	April 18, 2025	5 days	4250.00 \$	UAE - Abu Dhabi
Sept. 22, 2025	Sept. 26, 2025	5 days	4950.00 \$	Greece - Athens
Dec. 22, 2025	Dec. 26, 2025	5 days	4250.00 \$	UAE - Dubai