



Course

# COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEMS - CMMS-

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## **PREFACE**

Maintenance is at the heart of any industrial business. It is considered a contributory function to production, justified by the points gained in competitiveness and by the availability of equipment to produce more. It is therefore important to develop a strategy for improving this function and to promote ways to improve the performance of this activity by carrying out, preferably on a regular basis, a diagnosis to determine the corresponding weaknesses and strengths.

As soon as we approach the maintenance of one or more fleets of equipment, we can be confronted with the following problems: a machine breaks down but the time for the supply of spare parts is a few weeks, several pieces of equipment have to be checked urgently but no one is available, the technicians assigned to maintenance complain that they too often play the role of "firefighter". These problems are symptomatic of day-to-day management.

Computerized Maintenance Management (CMMS) tools make it possible to share all maintenance data within a team or at the company level [1]. Maintenance technicians can exchange information on the work carried out, the next preventive maintenance to be carried out, etc. In a nutshell, CMMS allows you to manage the maintenance of your equipment, just like sales in a company. All sectors of activity that have equipment to maintain can use a CMMS software package: industry, transport, telecoms, mass distribution, etc. This leaflet explains what CMMS is and how to implement it in a company.

The CMMS course material is intended for students in the first year of the Master's degree (LMD), specializing in Industrial Maintenance. Its purpose is to have an overview of computerized maintenance management, to present their role and the different equipment that makes them up. The content of this course material is presented in a simplified manner and does not require any particular in-depth knowledge. The only prior knowledge that can be useful is that related to the main industrial maintenance techniques and these different management tools. We have tried to provide all the necessary elements to learn and understand this specialty course.

This course is accompanied by different examples on typical Computerized Maintenance Management software in order to give a clear idea of the aspects on which it is based. In order to present its content well and respect as much as possible the Master Bachelor's (LMD) training framework, the material is structured in four (04) chapters:

## **Part I**

### **Chapter 1: Elements of Maintenance Analysis**

### **Chapter 2: The Basic Modules of CMMS**

- 2.1 Equipment module or fleet
- 2.2. Stock module
- 2.3. Work management module
- 2.4. Analysis-indicator module
- 2.5. Budget module and expenditure monitoring
- 2.6. Human resources management module

### **Chapter 3: Conducting a CMMS project and codification**

- 3.1. Importance of the human aspect
- 3.2. Project stages
- 3.3. Feasibility study
- 3.4. Choice of the CMMS tool and the necessary modules
- 3.5. Causes of failure

### **Chapter 4: Maintenance Work Management, Planning and Optimization**

## **Part II: Tutorials**

### Use of CMMS software

- Collection of maintenance information of the property
- Entry of intervention reports, monitoring sheets, expertise sheets
- Elaboration of machine monitoring documents to compile the historical file

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