

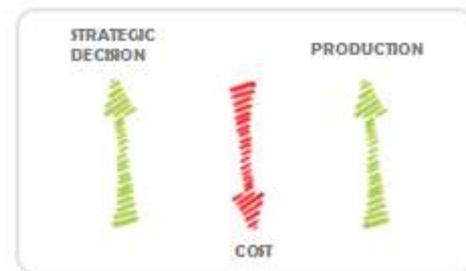
Maintenance in tough economic times:

The importance of maintenance management

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For many years, the absence of a Maintenance Management System caused the deterioration of equipment that make up the set of assets of organizations since, for most companies, the only practiced maintenance was corrective – maintenance interventions would only be carried out to repair the machines that broke down. With increasing automation and the resulting increase in the number of breakdowns, companies soon realized that the frequent Production downtimes or frequent ‘bottlenecks’ in maintenance services provided caused a decrease in product/service quality, consequently increasing costs and reducing competitiveness and, in some cases, this led to potential loss of customers. The philosophy of corrective maintenance is no longer satisfactory. The maintenance concept evolved from simple repair of the fault to another, more recent concept, in which interventions are planned in order to avoid breakdowns – preventive maintenance.

An uncertain and irrational business environment caused by the credit crunch, where the investment plans were clearly affected, the issue *Maintenance* is key factor in reducing costs and should be treated as a strategic investment, as a good ally in times of crisis, and not as an expense, because besides keeping assets running well, it also keeps the production process or the provision of services running well – and these are the core activities of the Organization! An optimistic perspective: humanity, since the beginning, has always been forced to evolve in times of scarcity.



Some small and medium enterprises (SMEs), however, have not invested in their maintenance processes by labeling it "complicated and expensive" when, in fact, it is relatively simple and should be seen as an investment. A Maintenance Management System is not implemented in most of these SMEs because of the idea that it only applies to large companies and that only these large companies have the capital and organization to do so. This is a myth ... and it needs to be unmasked. Accepting that only large organizations can be organized by implementing a maintenance management system capable of providing control over equipment in order to minimize downtime and optimize productivity (and, consequently, profits!) ... this is a myth. The SMEs can and should implement a maintenance management system within their abilities and, in this area of the organization, they can perfectly compete on equal terms with larger companies.

We have seen that maintenance management is strategic in what the value and ‘lifetime’ of machines, equipment and facilities of any company is concerned, this applies to any industry. From a Corporate perspective, nothing is more important than ensuring the availability of equipment and facilities of an industry, a hospital, a shopping center, a supermarket, etc.

Understanding the adequate type of maintenance for each organization is a key success factor. It is known today that successful companies increasingly adopt proactive maintenance techniques and practice *Engineering Maintenance*¹. In practice, it can be said that an organization that carries out corrective



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maintenance but is gradually including preventive and predictive maintenance tasks, will quickly be carrying out *Maintenance Engineering*.

Regardless of the maintenance management model implemented in a given company, the fact is that Revenue and Profit are directly influenced by the maintenance strategy adopted, because Maintenance operates in areas that are crucial to results – Production process or the Services provided (depending on the type of activity). And whatever the type of organization – public, private, industry, trade or services – they all should have a Maintenance Management process, however simple it may be – this is essential to an organization's survival.

And how to start this maintenance management process? To organize a wide range of technical information and, after that, to actually start maintenance management, you have to collect data on the equipment, structuring everything that belongs to the organization in a *functional systematization*, in other words, organizing the assets in the form of systems; a sort of an 'X-Ray' of the facility from an engineering point of view, which reveals the tree structure of all large groups and their *systems*, understood as sets of objects that perform a specific function, that contribute to each of the functions necessary for the facility's operation – lighting, heating, ventilation, each production line systems, etc..



The main advantages of this systematization are:

- A logical and consistent coordination of all items / assets / equipment in the organization;
- Quick search of all assets that contribute to a specific function;
- Recording and analysis of costs and maintenance effort at many levels: equipment level, system level, systematic large group, all of the organization;
- Obtain maintenance and key performance indicators (KPIs) at many levels: as above.

The vast majority of companies want to develop themselves in order to always achieve a better performance. The guideline in this quest is drawn by these indicators. A management system is very important to compute and monitor these indicators and to obtain them in a consistent and comprehensive way. Organizations that follow best practices in maintenance, if well managed, should definitely see a reduction of Production costs or Services.

In the past, it was crucial to have the materials and labor available to correct/repair the breakdown. Today, the priority became having the information available. Hence, the inevitable trend of computerization of processes – it provides a natural increase of routines (both in operators and in maintenance managers), it automates scheduling (and many other tasks) and it simplifies access to data in general. A CMMS (Computerized Maintenance Management System) has a very important role in modern management: it contributes to a greater predictability of activities, which greatly contributes to a more comprehensive and, therefore, efficient management of materials, human resources, services and costs, while providing an expected increase of the reliability and availability of equipment.

It is clear and it is unquestionable that, for Maintenance to contribute effectively to the success of an organization and for the organization itself to look for this achievement, Top Management should start to *see* Maintenance as a strategic area of the entire business system and no longer as an area simply generating costs. Maintenance should be seen as an area that adds Value to the work processes and to the business. Furthermore, for those organizations that want to run their business in a holistic and strategic view, it is also clear that they need to implement a Maintenance Management System.

¹ Maintenance Engineering: *is the discipline and profession of applying **engineering** concepts to the optimization of equipment, procedures, and departmental budgets to achieve better maintainability, reliability, and availability of equipment*

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