

Role of the Maintenance Management Consultant An Approach to his Importance in the Maintenance Function

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1. INTRODUCTION

It is no doubt true that the economic downturn experienced in recent years has led companies to a greater cutback on outsourced services; however, it is no less true that there is now a growing tendency to resort to outside experts to provide support to the operations of a specific in-house department.

How can this apparent paradox be explained? It is a mere consequence of the widespread recognition gained by the function of consultancy. The consultant plays indeed a key role in identifying malfunctions and providing adequate solutions often already tested in other organizations – the implementation of best practices in the management process, for example; it therefore becomes clear that his experience and know-how, preferably acquired in various types of scenarios, are of the utmost importance.

In what concerns Maintenance / Operations, the external consultant is in a position to play a quite significant role in the maintenance field, namely by developing a plan to improve the organization performance – for instance at the level of increasing production equipment uptime – as well as the resulting economic profitability.

Maintenance is nowadays among the functions with the greatest potential to improve business competitiveness – and what is expected of a Maintenance Management consultant is to focus his work precisely on exploring, maximizing this potential, on optimizing maintenance in order to improve the said competitiveness.

In light of the foregoing framework this article aims to reflect on the role of the Maintenance Management consultant. It presents the main areas he gets involved in and seeks to provide a model for his state-of-the-art core competencies, thus providing an overview of the specialist consultant profile in this area.

Additionally our aim is to contribute towards recognition of the most significant value of external consultants within an organization.

2. MAINTENANCE MANAGEMENT

Gone are the days when the only practiced maintenance within corporations was corrective; interventions would only be carried out when an equipment reached its service life limit, when failure occurred or when it approached loss of function. A paradigm shift clearly happened and this scenario no longer reflects nowadays reality. In fact, this idea is reinforced by the acknowledgement on the part of organizations of the importance of maintenance in industry activity. According to Cabral [1], “Maintenance Management is the framework of actions **directed towards working out and maintaining a balance point in the company’s maintenance level between benefit and cost that maximizes the positive impact of maintenance on the overall business profitability**”. Financial performance alongside other performance indicators should therefore be “consequences and tools for evaluating and assisting in decision-making, not goals in themselves.” [2].

Without prejudice to the foregoing, once the threshold of a well-organized management system is reached, namely through a progressive increase in planned maintenance in inverse ratio to the consequent decrease in reactive maintenance, greater savings will inevitably be obtained since reactive repairs cost 3 to 4 times more than planned repairs [2].

On this point it is fitting to quote Peter Drucker: “what you can't measure, you can't manage”. Performance improvement, as synonymous with Maintenance Management, should therefore be the major goal of any organization. *CMMS* (“Computerized Maintenance Management System”) is in a position to contribute significantly to the implementation of this goal, which may reach a marked level of complexity.

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It is within this context that the Maintenance Management consultant plays an important role, identifying malfunctions and delivering adequate solutions, with special focus on the implementation phase of the system. The next chapter will address in detail the role of this professional.

3. ROLE OF THE MAINTENANCE MANAGEMENT CONSULTANT

The mission of the Maintenance Management Consultant is to evaluate and assess maintenance performance – be it technical or organizational - within the corporation, by analyzing requirements and needs, with the aim of measuring and guaranteeing quality and efficacy in this field. He works in different functional areas of a business, ranging from the audits of the maintenance function, development and implementation of a Maintenance Management system, down to the transfer of knowledge (training actions).

An engineering consultant in this area of expertise is therefore expected to master a wide range of skills – project management, auditing, diagnostic techniques, management, benchmarking, information management, among others; he should have sufficient observation capacity and critical analysis capabilities to cope with whatever issues come his way.

Since he coordinates most of the consulting work he must be able to break down complex problems in a simple manner, reflecting about concrete problems together with the technical staff of the organization, while bearing in mind that he will have to put the client's interests first at all times in his decision-making process.

Flexibility is fundamental considering that the consultant must mold his behavior in line with his conversation partner. He will also need to be practical by adopting dialogue-facilitating attitudes, for which reason it is important for him to show excellent communication and relational skills.

He is expected to provide rigorous solution while leaving room for solid compromise and strong commitment to assist in the achievement of the organization's goals. All the more reason for the consultant to keep constantly up-to-date with the latest processes, Maintenance Management tools and techniques, as well as with changes in legislation.

The master principle to be observed is therefore trustworthiness; the consultant is expected to offer reliable analysis that provides a foundation for each approach.

Now that a picture of the usable referential skills has been given, the main activities of a consultant must be highlighted:

- gathering information related to the Maintenance function performance in the organization;
- developing the action plan for the maintenance consultancy/audit process to be implemented;
- recommending a performance improvement plan for the maintenance function;
- coordinating and assessing the implementation of the maintenance consultancy/audit process, according to the established plan;
- managing information related to the consultancy/audit process;
- Coordinating and/or carrying out training actions;
- Whenever applicable, recommend multifarious investments in the maintenance area;
- Upon project completion, monitoring and assessing as well as developing a final report on the carried out consultancy/audit process

In short: **needs assessment, diagnosis and identification of malfunctions; solution delivery; project implementation and assurance of feasibility in accordance with identified needs; coordination and conduction of training activities; monitoring and assessment.**

The previously mentioned tasks do not exhaust the universe of his duties and responsibilities; they are, however, representative and they illustrate the high-level intervention work of a consultant. Indeed, if we take as an example the assistance in putting together a Preventive Maintenance Plan, the role of his contribution throughout all stages of its development, drawing it up in alignment with the company's reality, is most significant.

The value of experience acquired through the implementation of various projects is recognized.

Indeed, the more intense the contact with different kinds of corporations, of various sizes and business areas, the richer this experience will be, since this is the best way for him to gather a variety of maintenance perspectives. He will gain the know-how he needs to cope with adverse situations, always assisting with the identification of the best practical solutions, adapted to the organization's needs.

Given the quite significant bearing it has on Maintenance Management consulting, it was deemed relevant to address, though briefly, the previously mentioned subject of implementation consultancy. If we take into account reasons that may contribute towards CMMS implementation failure then the consultant's role is likely to take on a yet more significant role. In [3], authors point out six determinant factors of CMMS implementation failure in an organization, among which the following three stand out:

1. Attempting to implement a new CMMS to an organization that is not "ready";
2. Believing that CMMS is the "strategy" rather than one of the "tools";
3. Failure to understand the need for a well-designed "change management" process.

The consultant's intervention required in each case is then described:

- i. CMMS implementation requires the existence of at least an organizational culture well prepared to implement proactive maintenance. **The consultant can play an important role in this matter, namely in assessing the stage of maintenance evolution within the organization.** As a rule, external consultants are more likely to act impartially since they are in a position to provide an outside perspective, they necessarily offer a more unbiased insight into problems incurred. They can exercise greater influence over top management, particularly when the moment comes to sell the project internally, as it is commonly necessary;
- ii. It is not unusual to think that CMMS is the strategy rather than the tool to support your maintenance management. **The consultant shall use all reasonable endeavors to get people to understand that the software is a key tool for improving Maintenance Management but is not the**

strategy itself. Once a stage is reached where both operational and management staff accept the software as the instrument that will enable them to achieve the desired level in Maintenance Management, a privileged position is reached where the benefits that CMMS can deliver are accomplished;

- iii. Quite often organizations struggle not so much with technical problems as they do with issues of human nature. **A mindset shift is therefore required, in order to overcome resistance to change, that so often occurs in businesses, even if in a latent state.** To that end consultancy must ensure right from the start the engagement and commitment of all members of the organization;

Given the importance of information in management and decision-making processes (Data → Information → Knowledge → Assisting Decision-making), the consultant must have in this regard a long-term perspective on the project; decisions taken and layout selected during the kick-off stage should be put into practice in line with it.

His problem-solving skills are a major asset insofar as his experience allows him to make the best decisions possible and head in the right direction.

As previously mentioned and contrary to what might indicate the unfair perception others have of him – a burden on the company, a mere cost center –, maintenance function demonstrates very significant potential for the overall business profitability and performance. Hence the accrued responsibilities associated with the consultant's work.

In short we believe that thanks to his multifarious experience, the Maintenance Management consultant adds most significant value in improving the maintenance function performance; his contribution is undoubtedly becoming more and more prominent, as illustrated by the ever-growing appreciation of his role on the part of organizations.

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