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The level of detail to consider in determining requirements and evaluating vendors is critical.

It is not uncommon for evaluation and selection of a computerized maintenance management system (CMMS) to take 6 months to a year. Too much detail can lead to cumbersome evaluations and comparisons and can create a "paralysis by analysis" situation. Too much detail also can lead to trying to design a system rather than configuring an existing package to the company's maintenance business needs. Too little detail leads to poor selection of software and subsequent failure of CMMS implementation.

Define requirements

Plant and facility managers must first understand what maintenance information management is and why it is needed. A maintenance information management system should support company missions, goals, and objectives for the maintenance and materials organization. Understanding asset information management software depends on what is driving the need for change. CMMSs go beyond the "point solution" mentality; they can affect the entire organization. Without reliable equipment at an effective price, and an information tool for managing activities, a company simply cannot achieve competitiveness. Because the CMMS affects the entire organization, implementation must not be considered trivial.

Form an evaluation team

After the goals for the CMMS have been analyzed, the selection team can be formed. The prospective users are the field experts best qualified to evaluate its capacity in their functional areas.

Team members should be prepared to be involved for a period of 2 to 6 months, depending on their experience and the complexity of the requirements. Traditionally, new systems require various forms of interfacing and integration, and Information Services (IS) representatives have been the primary evaluators. Today, however, although IS should be part of the team, advances in information technology allow more end users to configure a system and change its look and feel. Of course, the system must be configured under a detailed and controlled process.

If the company has little or no experience with this type of evaluation, including consultants or maintenance business integrators on the team can be helpful. Maintenance consultants can provide an outsider's experienced perspective in analyzing business processes and focusing on optimization of these processes. They also can ensure that the new system's requirements are driven by business processes supporting overall goals and not by the software vendor's

promotional literature.

The selection team's responsibilities include determining business process requirements, creating initial vendor requests for proposals (RFP), evaluating products through scripted demonstrations, compiling results, and making final recommendations.

Determine business process requirements

The underlying concept of business process analysis or "mapping" is an event-driven process chain that illustrates the maintenance business in a logical, consistent manner. Optimization begins with breaking out of old patterns and searching for profitable improvement opportunities.

Configuring a CMMS in the way that the business should work, rather than forcing the business to conform to the structure of the CMMS, maintains a process-centric approach.

Maintenance business processes must be integrated across all information systems--from asset care work order management to inventory management to purchasing to accounting and personnel management. Business process requirements define the boundaries of the system, the interfaces and integration to it, the functionality contained within it, and the type of technological environment desired.

Modeling a company's essential maintenance elements and their relationships with other processes can significantly strengthen the overall effectiveness of the execution process when an asset information management system is integrated.

Create a vendor list

While they are evaluating maintenance business processes, the selection team can begin creating a list of potential products and vendors that meet the initial phase of requirements. Reading about various vendors, reviewing their marketing materials, and reviewing high-level demonstrations give the team a chance to see what is available from both technology and functionality standpoints.

Typical information sources include trade and professional publications, software directories,

and the maintenance consultant's experience. The number of potential vendors at this stage should be 10 or 12.

Develop and submit requirements document
Detailed requirements help vendors identify product "fit" and can help in estimating costs. The more concise and complete the documentation is, the less risk exists for future cost overruns and delays. Submitting a detailed request for proposal that contains the requirements is the recommended approach. Vendors are asked to address the RFP point by point whether the software complies or requires custom work.

Hold vendor demonstrations
After the RFP responses have been analyzed, the number of vendors should be reduced to two or three. Meetings with those vendors can accomplish several goals:

- Clarifying issues and understanding the vendor's response to the RFP
- Assessing the vendor's ability as a business partner
- Assessing the vendor's capability in modeling business processes
- Setting up visits to reference sites.

Select the software
There is no simple "one size fits all" solution to making the final decision. Multiple factors must be considered, and the choice will be different for each company, depending on the company's vision, organizational readiness, and end user level of acceptance. The final selection should use three major criteria:

- The functional aspects of the product: Does it meet business process requirements?
- The technical aspects of the product: Does it meet technical IS requirements?
- The business aspects of the product and vendor: Are pricing and the cost for support acceptable? Will the vendor be easy to work with?

Creating a scoring matrix will aid in making the decision. The matrix should be built on the business process models and include technical and support issues. The matrix should also forecast return on investment weighting.

The keys to optimizing maintenance business are effective assessment, application, and optimization of maintenance management information systems.

The best investment protection for a CMMS is a thorough understanding of the existing maintenance processes and application of the maintenance system in concert with these processes.

This statement is true regardless of how big the organization is, or whether the new CMMS will replace an existing system or is the current system at the site. **MT**

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Steps In Selecting Maintenance Information Management Systems

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- Form evaluation team
- Determine business process requirements
- Create vendor list
- Develop and submit requirements document
- Hold vendor demonstrations
- Select software