



How to Avoid CMMS/EAM System Failures

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With the success rate of CMMS/ EAM System implementations at 50% or less, the following top ten reasons for failures are provided as maintenance tips highlight the most common selection, implementation and utilization problems. If companies can pay attention to these pitfalls, the number of success stories will increase dramatically.

Failure #1 Incorrect assessment of needs

Most companies have three-to-five-year strategic plans. These plans include details for manufacturing, product development, equipment procurement, workforce sizing, etc. Too often, though, three-to-five-year plans do not include maintenance requirements, and—in many cases—maintenance personnel are not even privy to the details of such plans.

If a maintenance organization is included in corporate planning, it can be proactive and make the changes necessary to provide the right kind of support to other parts of the company. Still, most maintenance organizations are reactive. But, when it comes to maintenance policies and programs, focusing on short term, reactive situations contributes to “false starts” or “taking the wrong path”.

You do not find many successful marathon runners staring at their feet. Good runners are observant, constantly watching their environment, their competitors, looking for anything that might give them an advantage in the race. Maintenance departments must have a similar attitude. They must understand their current situation but never lose sight of the goal of total competitiveness within the framework of corporate goals.

In far too many instances, though, maintenance managers “watch their feet” by focusing on short term goals, such as starting a preventive maintenance (PM) program or adding a technician, for example. They have no long range view of how to integrate these projects into a focused strategic plan. So the manager develops a disjointed organization that pulls in different directions.

In many cases, maintenance managers purchase a CMMS/ EAM System to generate PM inspections, or generate work orders or track inventory. But, as they achieve their specific goals, they want to make progress in other areas. Thus, their needs begin to change. Their current CMMS no longer meet their needs. Is it the fault of the vendor? NO, because the vendor worked with what was specified as the current needs and provided the services requested. The true predicament is that the maintenance organization could never look beyond its current problems to plan for future needs or requirements. When companies provide maintenance managers with the information and ability to plan for the long term, they will eliminate this failure.





Failure #2

Improper documenting of needs

This failure is closely related to the previous tip, in that you must identify the requirements for the system before you can document them. However, the more mature a maintenance organization becomes the more groups—such as stores, purchasing, accounting, engineering and executive management— will use the information in the maintenance system.

If the maintenance information system does not provide the data for the groups in a format and manner that is acceptable, then the others will not use the system. If some groups cannot use the system, it limits the degree of integration of maintenance and other parts of the company.

A related problem is the failure to get user input during system selection. A system should have not only the functionality required to meet the user's needs, but it also should have the ease of use necessary to make it acceptable to the users. And the final decision should rest with the maintenance organization, with input from inventory and stores, purchasing, MIS, engineering, quality control and accounting. But none of these other departments should control the decision.

The maintenance department must use the system to manage its own organization and job responsibilities. If another group selects the software, it will not meet the needs of the maintenance organization. This leads to confusion, and the cost for maintenance will increase, while the quality and efficiency of maintenance will decrease.

Failure #3

Neglecting to obtain management support

Management support is critical to the success of the program, since a maintenance system crosses many organizational boundaries. Without the management support necessary to enforce the discipline the system requires, the quality of the data produced by the system will be suspect. If the data is questioned, then each decision made based on that data would also be questioned. This situation quickly results in *sub-optimization* or general failure of the system. For example, if the inventory and purchasing group refuses to use the inventory and purchasing modules of the CMMS/ EAM System or even integrate to it. You will then be capturing only 50% of your cost data or less. After all, a large portion of maintenance costs are stores/purchasing related.

To obtain and keep management support, senior management must understand the benefits of implementing and using a maintenance system. This involves using key information discussed under Failure #1 and Failure #2 such as needs assessment and end user participation. However, you must take one additional step to ensure management support: translate benefits into dollars. This is the language spoken by senior management. Without financial justification, you will never obtain the support necessary to convince some parts of the organization work with the maintenance system.

Ongoing management support is especially important during economic downturns, since maintenance is traditionally one of the first areas in which companies make reductions. You can maintain on-going support

by getting periodic benchmark reports and compare, based on a long-range plan, where you are vs. where you said you would be. If you are ahead of schedule, document this point. If you are behind schedule, give the reasons why, and document what has been done to solve the problem. Of course you haven't addressed Tip #1 in this series, maintenance won't be included in the long-range plan, and benchmark reports will be impossible.

Failure #4 **Incomplete marketplace search**

The CMMS/ EAM marketplace is a large and diversified one. With more than 200 vendors presently competing in the market, it can be a time-consuming and costly process to examine each available ware package. To simplify the complexity, the first step is take the requirements outlined in Tip #2 in this series and compile them into a reference document. The document should highlight the needs of the Company as they relate to CMMS/ EAM. You then can use document to explain to vendors your requirements for software.

Depending on the complexity of your company's needs, the document can be as simple as a check list or as complex as a request for proposal. The more complex a company makes their requirements, the fewer the number of vendors that will respond. Identifying vendors can be as simple as pick up a directory or listing, frequently published in magazines. But how can you reduce the number of vendors? In some cases there is a corporate standard that the CMMS/ EAM system must integrate with a specific ERP System. This can quickly narrow the list since many vendors do not have certified integration with the ERP packages such as SAP, PeopleSoft, or Oracle.

A second method of narrowing the vendor list is to examine vendors' use of advertising and their participation in conferences or seminars. Usually only successful vendors advertise or participate in industry activities. This is a measure of the financial success.

A third method is to consult with other companies with processes or manufacturing techniques similar to yours. By finding out which system they use and which systems they considered, you can shorten your list.

A fourth method is to use a consultant. Consultants can be useful, but they also can be a problem. Some key considerations when looking at consultants are:

- Do they sell a package themselves?
- Do they have an arrangement with one of the vendors?
- Have they helped select packages for many Companies using many vendors?

Failure #5 **Developing an in-house system**

While this failure isn't as widespread as it once was, it still occurs occasionally. Its cause usually is one of three reasons:

- 1) Someone did all incomplete search of the marketplace.
- 2) Someone feels it would be easy to do.
- 3) IS or a programmer needs job security.

Consider, however, that of the more than 200 software packages on the market, one should meet the needs of your organization. Besides, developing software in-house is expensive. You still must do needs assessments—but then you still have programming time, the maintenance organization's time, the time for other groups to examine the test, plus support and modification time. In some cases, in-house development has cost 10 times more than purchasing a packaged system. Then there is the issue of on-going support. The vendors have support personnel, as well as software enhancement programs. A company that does in-house development must staff these positions themselves. In some companies, this cost alone has added up to several millions of dollars per year on top of development costs.

The important point is, though, that no matter how good in-house development looks, it is never as cost effective or as permanent a solution as purchasing a packaged system.

Failure #6 Inadequate assessment of vendors

Once the selection process has begun, evaluate the vendors—their software and services—and consultants. In a market as large as the CMMS/ EAM System market, you'll find vendors of all sizes and qualifications. Your challenge is to find the vendor with the software and specific support programs required to complete your project successfully.

You may need maintenance consulting, software consulting, hardware consulting, training or special documentation. Define which services you will need. Then, during the selection process, evaluate each vendor's capabilities to provide those services. Find out if the vendor has these resources as part of their organization or contracts with consultants for them. If a service you need is a third-party service, logistical problems could occur. Finally, it is always a good business practice to check with a vendor's previous customers to find out their level of satisfaction.

Failure #7 Insufficient testing of software

This failure is related to the previous one. Just as you check out vendors and their services, you should check out the software for the desired functionality. All too often, companies have purchased software based on what they saw during a demonstration. Then, once they have the software, they find it doesn't do everything exactly as they thought it should.

The best method to use in avoiding this failure is the testing of the software for a period of time, typically called a pilot. Usually a week or two is sufficient. However, to be fair to vendors, it is best to have their trainers on site during testing. This precaution ensures you are using software packages correctly and not overlooking any of their capabilities. Also, expect to pay for a trainer's time while he or she is on site.



During tests, be sure the right people test the software. It does not do much good for managers to test software if they are not going to use it every day. It is best to use the planners, supervisors, stores clerks, etc. these end users quickly will let you know how the software works amid whether or not it helps them to do their jobs.

This issue becomes even more important, when you are purchasing customized software. The failure to check the customized package against the specified requirements has led to many problems for both the users and the vendors.

Failure #8 Deficient implementation planning

Implementing a maintenance system takes resources. These resources may be financial, if you are having the vendor or a consultant do it. Otherwise, your necessary resource will be labor from your staff.

Implementing tile systems takes time. It does not happen overnight. During the implementation, it takes labor to gather data and to input it. Failing to realize this, some managers have promised quick implementations and paybacks. When they could not deliver this, they were dismissed or transferred. Most vendors who have been in the marketplace for any time at all have documented implementation plans. Ask for copies of the implementation plans for review. By reviewing these plans, you will see how long the implementation should take for an organization like yours.

Failure #9 Inadequate training/documentation

Many companies will still purchase software and try to “learn by the manual.” This is a very costly and time-consuming way to learn how the software functions. It is best to have the vendor’s training personnel train your people. If you allow your people to flounder or to let the vendor’s *programmers* train your people will spell sure disaster.

It takes a certain type of person to train for software use, and part of the selection process should include the evaluation of the vendor’s training personnel. Again, reviewing the training programs of Companies already using the software will ensure the program produces satisfactory results. Training and documentation also suffer when Companies try to reduce the cost of system implementation. One of the first areas they reduce is the amount of training or the number of sets of documentation. This practice results in poor utilization of the system.

Failure #10 Misjudging data collection time

Failure #10 is related to Failure #8. However, it is enough of a problem to warrant a stand-alone mention. Just ask yourself, how long does it take to gather and load the equipment, PM and inventory information



into CMMS? The typical project will require one hour per record. So, if you have 10,000 equipment, inventory and PM records, it will take about 10,000 hours (roughly 5 man-years) to load the data.

This holds true whether the software vendor loads the data or you load the data yourself. Improper estimates of the time or cost to load the data has caused many projects to fail. Just be sure you know what the total cost and time will be for your project. Occasionally, companies have other failures, but the elimination of these 10 common failures would produce many more satisfied users of CMMS/ EAM systems—Managers who did it right the first time.

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