

## Why our CMMS Isn't Living up to Expectations

by Matt Adams, P.E.

During the last few years I have half jokingly told my friends and family with children looking for careers to learn Oracle Financials or PeopleSoft, or SAP. All they need to do is learn how to reconfigure or fix the big enterprise systems used in our universities and follow in the footsteps of the big companies with offers to fix the original installations of enterprise resource planning (ERP) solutions. They can easily charge hundreds of dollars per hour and always have more work than they can handle.

However, the big costs and disappointments of these projects within our industry have become a cliché. Unfortunately, within the facilities departments, many of our mini-ERPs, or what we call computerized maintenance management systems (CMMS), have suffered a similar black eye.

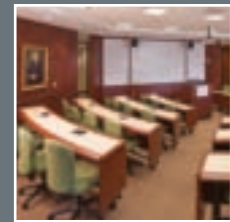
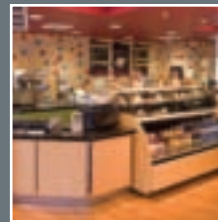
There is a clear issue with underutilization or poor return on investment for many CMMS systems purchased within the APPA community over the last 10 years. The reasons for this result are many, but the sense of disappointment is singular. The scenario has been too often repeated. After years of working with little or no CMMS technology, a department finally is funded to procure a new IT system. The department establishes committees for the task and research options. Vendors vie for the project with lengthy presentations. The staff gets their hopes up and the expectations run high. Finally they can get away from our paper systems and Excel spreadsheets. After this big purchase, they will become



streamlined and efficient. Then, two or three years after they made this historic investment into our department, they slid back into many of their previous legacy systems. What happened? Why aren't we using this

“white elephant” more? The system is not broken, but they continue to spend precious resources on it—without getting the expected benefits. Where did things go wrong?

There is an expression that applies to this CMMS selection process: “never go to the grocery store on an empty stomach.” We are so “hungry” for a new system that we often get much more than we really need. The archaic funding mechanisms that many of us endure delay the purchase and this makes us even “hungrier.” When we finally get our chance to purchase a new system, we want to get as much as we possibly can. There is a sense that this is our only shot at this, so we better make the most of it. (This



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*Matt Adams, P.E. is president of FM<sup>2</sup>, Atlanta, Georgia. E-mail him at matt@adamsfm2.com.*

same sociology plays out with our capital projects, but that is for another column.) It is basic human nature. However, we must learn to discipline ourselves, or there will be a strong likelihood of over-purchasing.

More fundamental to the CMMS lack of return-on-investment issue is the lack of preparations. Most of the purchases in our industry have a budget for the software and its initial installation and then support. This cost, while perceived to be high already, is only half of the cost. That's right; if the CMMS project only has the cost of the software installation included, you have under funded the project by half. Keep in mind that for this rationalization I am valuing internal labor for what it actually costs as if we were paying the bill to an external consultant. Given this assumption, the rule of thumb is that there should be an equal amount of

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preparations associated with any CMMS implementation; the cost of which equals approximately the cost of the system itself. From another perspective, if you are about to purchase a system and you cannot roughly identify a combination of internal and/or external labor associated with preparing for the project equal to the cost of the system; you are likely not properly prepared. The department is setting itself up for disappointment later.

Given this new rubric for total project costs, what exactly is included in the preparations? The primary task for preparation is process analysis. I know that for some it sounds like I am about to go into "consultant speak." Do not be afraid. Most of our industry's professionals actively execute process engineering continually; they just don't characterize it as such. The first step is the most important and involves identifying, analyzing, and mapping your existing processes. Each service center within the facilities department has one or more primary processes associated with its service delivery or support function. This research provides the baseline of the current operations. Without it we don't know where we are or how to get to where we want to be.

Next is the research of modern CMMS systems. Oddly enough, many of us do this while we are in the interview process. This is too late. The selection committee or working group assembled for this initiative must have a solid working knowledge of the basic features and functions provided by the CMMS publishers that specialize in our industry. In order to use this technology to improve or enhance our internal processes and overall effectiveness, we must know what is available to work with. This research is best done in a systematic, structured manner whereby the primary and secondary features of the available systems are listed, explained, and prioritized in order of perceived need or direct impact on the department. The features should be defined in lay terms for the team illustrating potential impact on each service center.

Given the knowledge of what a typical CMMS system can do for each service center, only now can effective process reengineering be completed. All process engineering has two primary categories; manual and electronic processes. They are intertwined and play off of each other, but without an understanding of CMMS abilities,

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there can be no full reengineering of processes that utilize the tools provided by the various vendors. A second pass through the departmental processes is executed with proposed improvements to the old and clear links to the future CMMS system. The new and improved process maps are now goals and clearly illustrate where the team sees CMMS acting upon the service center processes.

At this point, it is time to purchase the CMMS system. The selection process for a good software system is a concept in and of itself. Rather than describe it now, I would encourage all to solicit the help of the campus internal IT departments. However, there is one additional item that must be on the shopping list which is often excluded from past projects. The additional work (supplied by the software vendors) includes configuration specification, adjustment, and sustainment. Configuration specification is a specification of variables, fields and attendant features within the vendors system and specifically how they are configured upon installation to support the new and improved departmental processes. There should be plenty of consulting time included in the vendor's contract to review the new process maps and understand the team's expectations. This is, in fact, a formal set of documentation that is left behind.

Following installation, the next step is related to adjustment. At least one time, the vendor should return to campus after the system has been in use for a period of time, say 12 months. At this time, the configuration review and process maps are updated based on real experience with the system. This step is extremely important and rarely performed. How can you expect to get it exactly right the first time? You don't know what you don't know.

Finally, the last task is sustainment. This is simply ongoing training and retraining. No change to a department's processes and systems

will endure without reinforcement. This too is a major requirement that is often overlooked by our peers. The vendor contract must include a retainer or a pool of training hours used quarterly or semiannually by the department's staff for ongoing training of CMMS utilization and reinforcement of the new processes. This should go on for at least three years, preferably longer.

Ultimately, we can be our own worst enemy if we try to buy more software than we can absorb. We can only absorb or utilize what we prepare for. This discipline takes time and resources, but is the only way to actually provide a return on your investment of a new CMMS system. †



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