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Phase three: Instilling a mindset of continuous improvement for system optimization.

The biggest payback opportunities in an EAM/CMMS implementation are often never realized. During product selection, goals were set for the application and specific business benefits were targeted, but the project scope was probably scaled back to "must haves" rather than the full scope of recommendations. During implementation, you kept a running list of additional features, functions, and data or process changes that were considered to be important to the success of the project but were deferred because the budget was an issue or the timing was too tight.

Even though the EAM/CMMS is now live and rolled out throughout the operation, you are not seeing all the benefits you know are possible—if only you had the chance. Implementing the "wish list" appears to be a pipe dream because priorities have shifted and project resources have been reallocated.

There never seems to be an opportune time to improve a business solution, which is why some refer to phase three as "phase never." This article examines how to overcome this obstacle, and how incremental improvements can have a profound impact on return on investment (ROI).

Opportunity management
At each step in a project lifecycle, great ideas are postponed to an unnamed later date. As time passes, the details are often long forgotten. This obstacle to real improvement can be averted by committing to phase three at the outset of the project. That commitment, backed by organizational support and a methodology for continuous improvement, is an investment that will pay dividends for the life of the new system.

Instilling a mindset of continuous improvement early in the project ensures the switch does not turn off at go-live. From the inception of product selection and throughout the implementation, the project manager must systematically capture and "own" each deferred opportunity. The implementation audit after roll-out, as well as ongoing use of the system, will reveal fresh opportunities for improvement.

Pre-implementation deferrals

The cost benefit analysis report outlined direct financial benefits associated with a wide range of proposed improvements. That document was pivotal in obtaining necessary funding for the new system. However, project funding tends to be selectively focused on immediate needs that will return the greatest operational benefit and ROI.

An application module may not be considered mission critical, or a transition to handheld devices may be postponed. An electronic document management system (EDMS) could solve many problems, but now is not the time. Even if approved, certain planned improvements may be relegated to workarounds if the preferred vendor's solution does not completely accommodate the requirement.

Business improvements commonly postponed to "phase never" include:

• Reliability centered maintenance (RCM). Many times, the cost benefit for a new system is based on RCM improvements. Although most EAM/CMMS systems contain reliability-centered functionality, it is not the same as having an RCM program. Although its benefits are undisputed, RCM program development is a time-consuming endeavor that is seldom conducted in parallel with new system implementation.

• Complete cost interfacing. Best-of-breed time management and materials management systems are sometimes not interfaced with an EAM/CMMS. Therefore, hourly rates, union contracts, per diems, call out premiums, shift premiums, and other factors that impact actual work order costs may not be factored in work management budgets and repair/replace decisions.

• Contractor time management. Contract services are often managed within the contractor's own management system, and paper invoices, timesheets, and backup documents are manually entered in the EAM/CMMS. This error-prone procedure delays the ability to track contractor time and costs, when instead the contractors could be entering their data directly into the EAM/CMMS.

• Document management. The paper chase performed by engineering, planning, and craft personnel can be alleviated by implementing document management functionality or integrating to a separate document management system. CAD drawings, piping

isometrics, piping and instrumentation diagrams, and exploded parts diagrams from vendor technical manuals are examples of the types of information that would save time if readily accessible.

• Project management. Project management capabilities within an EAM/CMMS system allow users to budget, approve, and manage project costs in real time. This gives time to react before a problem can escalate. The alternative is relying on financial system reports, which typically arrive 30-60 days after the fact, and learning too late that the project is in trouble.

Leftover opportunities like these are usually shelved until the new system proves its worth and/or personnel and money become available. The project team leader needs to own each of these issues and log them as post-implementation optimization candidates.

Implementation deferrals
During implementation, scope boundaries are often challenged due to unexpected developments. Data quality issues or a hardware limitation may be discovered. Product or process enhancements might be required. A new report or KPI may be needed, or an interface to some obscure system might have been overlooked.

When unplanned tasks disrupt the schedule, planned activities can get shortchanged. If the scope is strictly maintained, practical improvements may be indefinitely suspended. Throughout the implementation, any issue that is consciously diverted needs to be logged by the project manager as a candidate for future optimization.

Post-implementation deferrals
Before any optimization efforts begin, it is important to complete the implementation by ensuring the initial project objectives are being met. To accomplish this, project team members should be strategically placed with key end user groups for a short period following go-live. They answer any questions, provide further guidance on new business processes, and ensure a general level of comfort to the end users. If requested, the vendor or consultant will provide resources to supplement the help desk and provide detailed knowledge of the new software system and its interaction with the new business processes.

Periodically following startup, the project team will gather performance data to verify that productivity gains are on schedule. It is easier to justify optimization efforts if the new system has delivered measurable benefits and ROI assumptions are validated. Additionally, users should be polled for system satisfaction. Which processes are still not clear? Where do gaps exist? What tasks are still being handled manually and why? Which processes take too long or have too many steps?

In the days and weeks immediately following go-live, this process of ensuring all users are getting the most out of the system can bring to light further opportunities for enhancement. More may be discovered before the project team disbands during its evaluation of lessons learned. Whatever the source, each unveiled optimization opportunity must again be centralized with the project manager for consideration.

Ownership transition
When the implementation project team finally disbands, the list of accumulated improvement opportunities must change hands. Otherwise, it could vanish into the abyss of "phase never." Now is the time to transition ownership of the list from the project manager to the user community, who will carry on the responsibility for continuous improvement within their day-to-day work processes.

The key to continuous improvement is to establish a user group that can communicate and manage the system needs of the user community. The user group may include some project team members, but also should include new resources representing the variety of departments and sites using the system. The group will start with the list transitioned from the project manager, and assess new software problems identified by the help desk, potential enhancements identified by end users, data improvement requests, and new interface requirements. Additionally, the group should evaluate patch releases before they are implemented to ensure that the fixes are worth the effort.

Driving new gains in familiar territory
It is not necessary, nor advisable, to implement every recommendation. A cost benefit analysis should be performed for each proposed optimization activity. Even those previously quantified during product selection should be re-evaluated. The user group will weigh and prioritize the tasks according to business need, and benchmark them against best practices. The group will determine whether system, security, or database tuning can resolve the problem. Less-expensive workarounds should be considered if they can make a noticeable improvement. Only the most beneficial opportunities should be presented for management authorization and resource assignment.

You should be experiencing déjà vu by now. Although a user group has replaced the original project team, optimization follows the same project lifecycle as a new system implementation. Activities must be justified, planned, developed, tested, trained, implemented, and supported after go-live. Continuous improvement, therefore, is truly a cyclical process and you have essentially returned to phase one.

Previous articles were " Managing an EAM/CMMS Project—Phase one: An unbiased team approach to system selection " and " Managing an EAM/CMMS Project—Phase two: Best practice methodologies for system implementation" .

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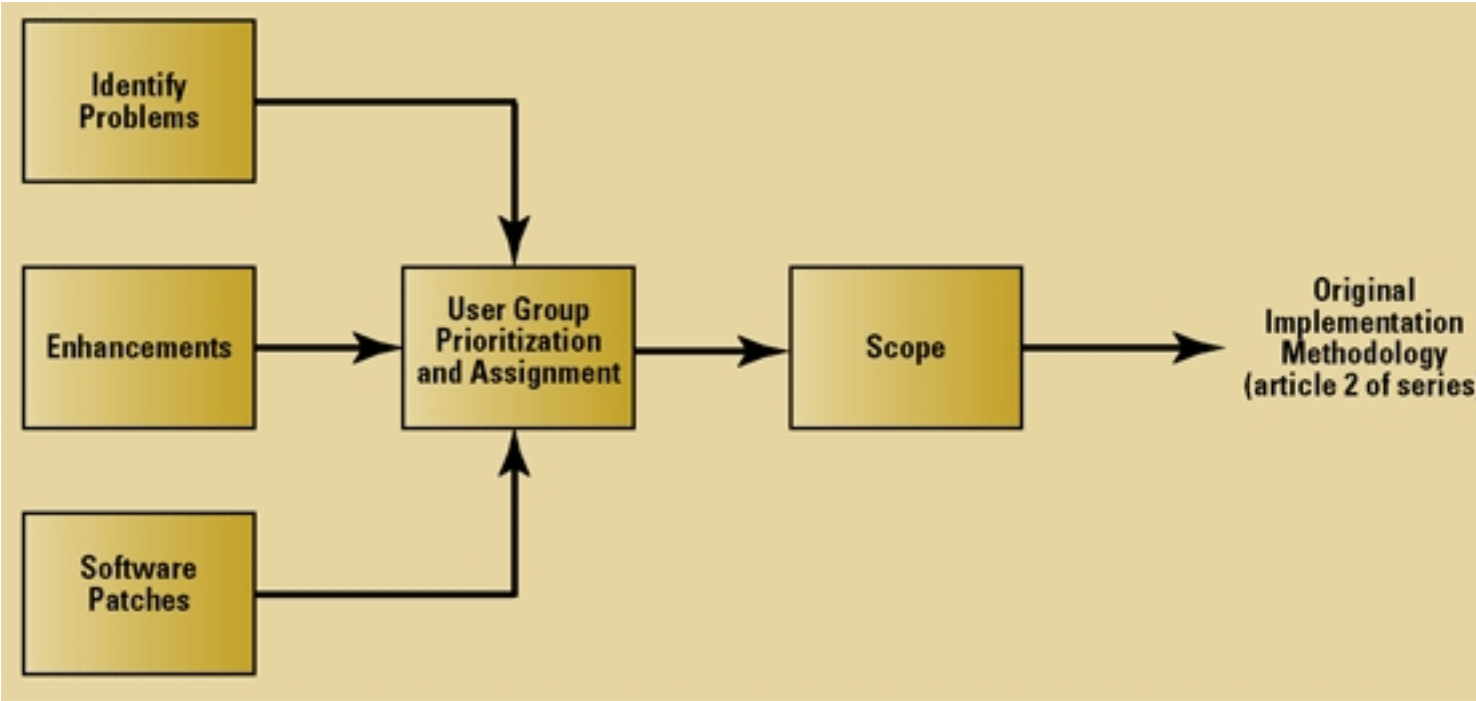
System Optimization Process Flow



The processes that are part of EAM/CMMS project optimization.