Phase one: An unbiased team approach to system selection

The latest ARC Advisory Group study of the enterprise asset management (EAM/CMMS) software market profiles more than 80 maintenance application suppliers. This number of choices is enough to make any plant manager shudder. How can you pick the tool that is right for you? Is the decision left to your chief information officer (CIO) who may prefer a specific technology? Should it be the chief financial officer (CFO) who may be partial to the ERP system used for financials that also happens to have a maintenance module? How about the plant manager who is concerned about the growing complexity of regulatory compliance? Or the maintenance manager who may have specific functional needs?

Maintenance touches many business areas and systems, and all parties want a solution that best serves their own needs. It may seem counterintuitive, but some companies give precedence to nonmaintenance organizations when making maintenance system decisions, and then fail to achieve the full scope of intended benefits. Other plants give maintenance free reign without considering the big picture impact.

The tug-of-war between decision makers can make or break the success of an EAM/CMMS implementation. This article addresses the delicate balance of wants and needs, and how they apply in the application selection process.

Acknowledge the needs
Plant maintenance is considered by some to be the unglamorous underground of a company's operation. It may be just a nagging afterthought in the minds of finance, human resources, production, supply chain, and administration personnel. That is, until something goes wrong. The spotlight turns on when disruptions to "normal" business operations occur, and turns off again when production resumes. No one knows better the critical role played by the maintenance organization than the maintenance personnel themselves.

Why is it, then, that everyone has an opinion on which business application best serves the needs of the maintenance organization? Is there room for more than one decision-maker?

The short answer is yes. The chief operating officer needs a system that supports

reliable, safe, and high-quality throughput. The CFO demands timely and accurate reporting of each maintenance, repair, and operations transaction that impacts the general ledger. To the CIO, compatible, extendable technology is of utmost concern. The storeroom must have adequate, but not excessive, spare parts on hand to keep the operation running. Buyers want enough information with enough notice to negotiate the best prices on parts and equipment. Even the chief executive officer, who wants to increase revenues and decrease costs, has a stake in maintenance system decisions.

And then there's maintenance. Maintenance personnel have an exclusive understanding of how best to safely and effectively keep all plant equipment and facilities operational. They also have unique knowledge of the data and processes needed to perform their job. They clearly have the most to gain—and lose—with the selection of a new maintenance system.

Because so many parties have an interest in maintenance, an unbiased approach to selection is essential to ensure the company makes the right decision.

Prerequisites for success

With so many diverse needs to be met, how can a company select the right software? There are literally dozens of EAM/CMMS solutions on the market of varying depth and quality—some extensions of ERP systems, and some best-of-breed. The vendors profiled by ARC are only the more prominent of a much larger market.

Providers come and go, merge and divest, and continuously tailor their products and strategic positioning. Over the years, ERP providers have beefed up their maintenance modules to better compete with niche players. Best-of-breed products provide new levels of depth and breadth, and integration has improved due to technology improvements. The utmost priority must be given to determining the single best solution.

The decision process itself can impact your success also. When a new ERP system is implemented, plant maintenance is often an afterthought and maintenance personnel may be excluded from the selection process. Even when a best-of-breed maintenance system is selected along with a suite of products, decisions may be based on integration capabilities first and functionality second. Companies cannot afford to let this continue.

Maintenance has evolved into a strategic practice that can generate a competitive advantage with high reliability and low costs. New technologies and maintenance strategies such as computerized modeling and failure prediction allow a new level of sophistication not possible in the past. Therefore, maintenance personnel must take an active role in every maintenance system decision.

The selection team

The people you can least afford to lose in day-to-day operations are probably the best ones for the selection team. It should be led by either an IT project manager or an operations or maintenance manager with project management skills. The balance of the team should include skilled representatives from all affected departments. Each team member will need a generous amount of dedicated time away from daily operations to successfully complete the selection. It may hurt in the short run, but the long-term rewards are great.

An experienced third party can help soften the blow. A facilitator from outside the organization can jump-start the selection process, minimize the time impact on critical resources, negotiate delicate turf issues, and expedite an unbiased decision.

No matter who leads the selection, in order to mitigate the risks in this process and achieve the greatest possible return on investment, it is important that decision makers have or develop extensive knowledge in:

- **Business: best practice business processes, data, and methodologies**
- **Technology: hardware, software, and networks**
- **Culture: organizational roles and responsibilities**
- **Industry: drivers and opportunities relevant to your industry**

• EAM: long-term strategy and viability of the vendors

How to decide
Selection team responsibilities include conducting a thorough internal assessment, attaining a strong understanding of the broad EAM/CMMS market, narrowing the field to a select few products, and performing a methodical assessment of the short list before choosing the right solution for the job.

1. Business review and performance assessment
Interviews and workshops are conducted to dissect and document present-day practices, and underscore those that are inefficient. Process bottlenecks, organizational constraints, data inadequacies, and technical limitations are addressed. With an emphasis on industry best practice models, potential remedies are outlined so the problems will not be perpetuated. This is the big picture stage, looking not only at the potential of EAM systems, but progressive, compatible technologies as well.

2. System cost benefit analysis
Unless you can articulate your needs in terms the executive team can understand, you may have difficulty receiving financial backing. Recommendations from the business review and performance assessment are the primary drivers for the cost benefit analysis. The authors must have a high-level understanding of comparative productivity gains achieved by other companies, as well as typical solution license, implementation, and support costs. The cost of doing nothing also must be included. Existing software and hardware will eventually become unsupported, and future integration costs will rise as related systems change. A thorough, bottom-line justification will provide the ammunition necessary to receive executive support.

3. Business requirements definition
Approval to proceed follows with a documented framework of business needs and system functions required to support the recommendations. Every business process for each role impacted by the new system must be documented and reconciled against industry best practices and lessons learned. This includes, for example, planned and unplanned work, union and nonunion labor, in-house and contract services, regular and overtime hours, and direct and stock materials. Once defined, a weight can be given to the requirements to allow for an unbiased evaluation of potential software products.

4. Request for proposal (RFP) development and evaluation
The RFP delivered to short-listed vendors must concisely and accurately convey the full scope of your needs. The business requirements definition provides the basis for this deliverable. Each vendor response must be carefully judged against your weighted needs. Methods to automate EAM/CMMS evaluation using quantitative measures at various levels can facilitate objective analysis and selection.

5. System selection and contract negotiations
Short-listed vendors should be provided a standard demo script that highlights your required functionality. This way, when the vendors demonstrate their software to the selection team, the typical sales hype is avoided. It is also beneficial to visit other companies currently using the software in order to gain further insight into strengths and weaknesses. Although all signs may point to one product, insight into the individual vendors and the near-term and enduring impact of a decision also must be considered. Only in this way can you be assured that you are selecting the solution that will meet long-term business objectives. Contract negotiation is the final, critical step to ensure that your needs will be met and your investment will be protected.

Is it worth it?
After reviewing these steps, you might have doubts. EAM/CMMS selection is no small task, and it comes with a great deal of responsibility. It would be easier to just leave well enough alone, but consider the long-term rewards as well as the risks and costs of doing nothing.

An effectively selected and implemented EAM/CMMS will undoubtedly generate bottom-line savings, but it is not all about money. Employee satisfaction will increase as time is better spent on productive work, knowledge is available when and where needed, and skills are allocated to more challenging responsibilities. Improved safety practices will benefit your employees and the surrounding community. Unplanned interruptions will be avoided, and downtime will be better managed. An investment made now can benefit everyone in the long run. Just make sure you identify the right team to lead the way.

Future articles in this series will discuss software implementation and project optimization.

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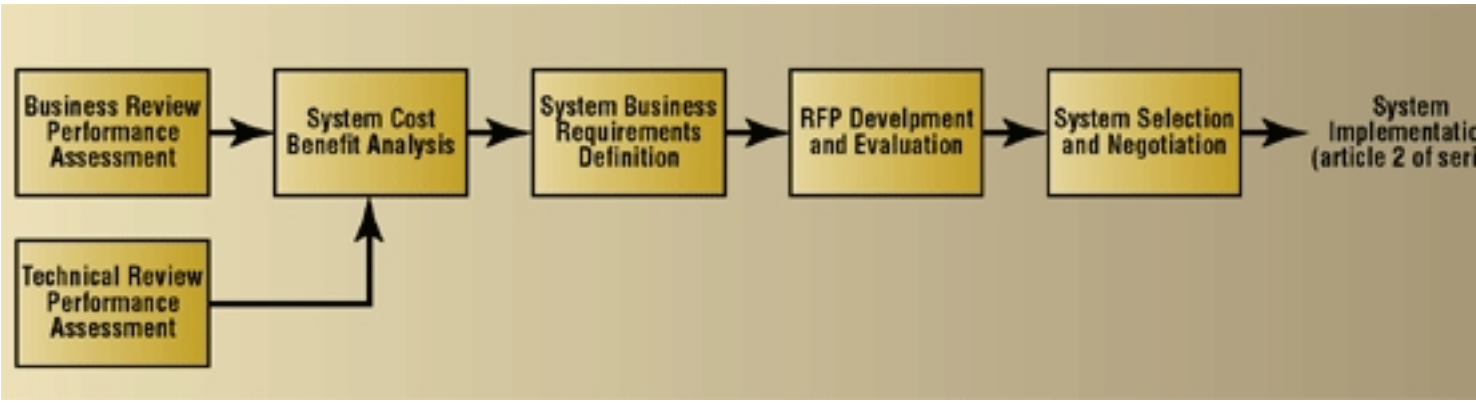
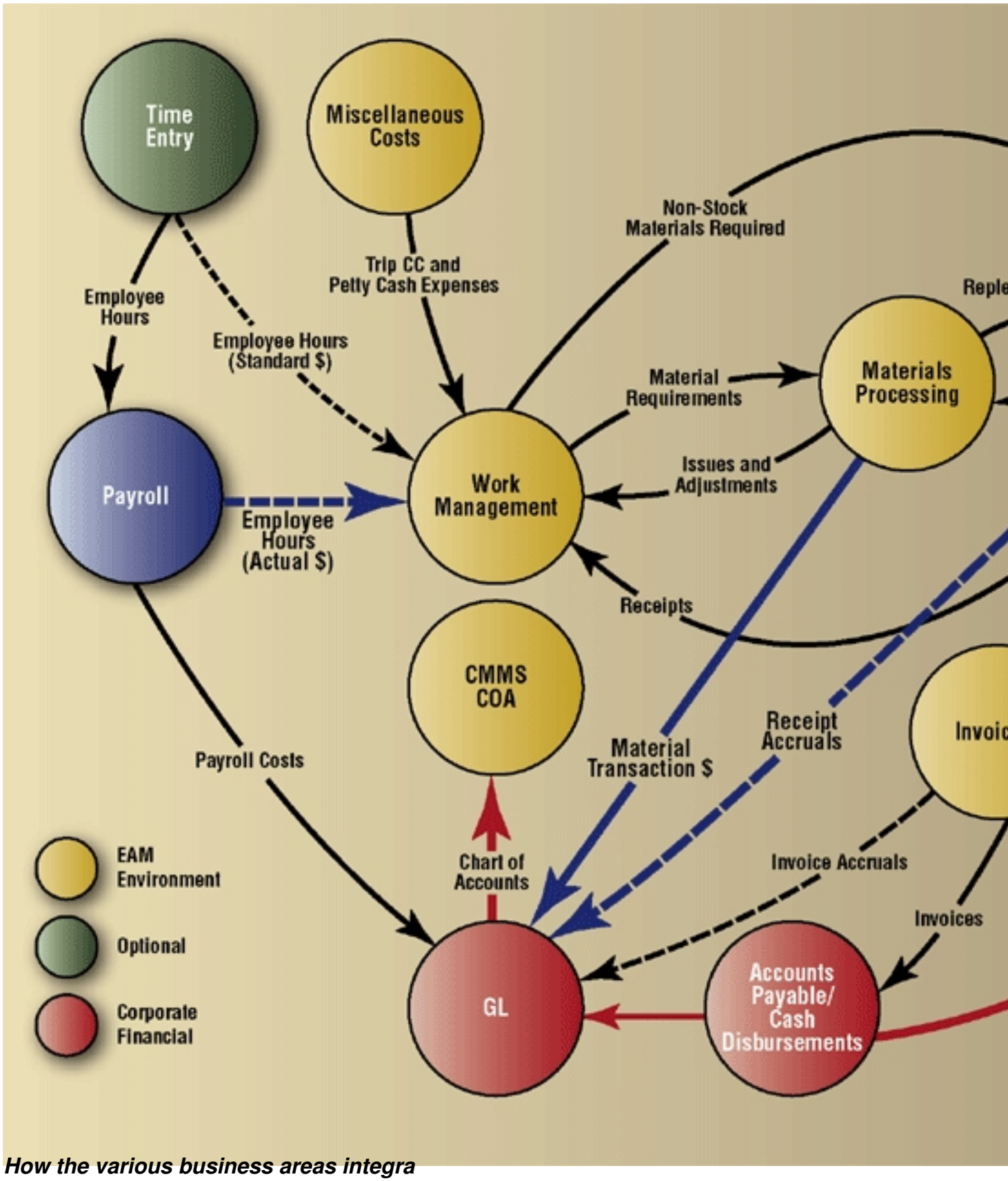
System Selection Process Flow



The processes that are part of the EAM/CMMS selection project.

Process Integration Summary



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