Reliability
The Essentials of Eliminating Downtime of your Electric Motor
Asset Management? Or, Maintenance Management, Re-branded?
Most maintenance professionals have heard of a computer maintenance management system or the term CMMS and know the general benefits such a solution provides. CMMS utilization has been on the rise since the late 1980s and it’s hard to find any large company involved in equipment maintenance that doesn’t use a specialized software package to assist in its equipment maintenance efforts.

Throughout the last decade, capital intensive industries have moved away from stand-alone software solutions to the integration of their CMMS onto company-wide software packages under a methodology called enterprise resource planning (ERP). As companies grow, they tend to integrate procedures into a unified system with benefits that range from increased workflow efficiency to a much deeper, real time and accurate reporting that helps top management make faster and more informed decisions.

Needless to say, the costs associated with these integrated solutions are quite high. Software customization, IT equipment, employee training and continuous IT maintenance all pile up to a rather high monthly bill. This means that only companies that are large enough, both in terms of organizational complexity and revenue, stand to benefit from the use of these systems.

The same main underlying reason that presently justifies the use of ERP systems in large companies is driving the use of individual

**Figure 1:** The image to the left shows the CMMS as a stand-alone module in large companies from the late 80s to the 90s, while the image to the right shows the CMMS as an ERP module in modern large companies.
management modules by smaller companies, very much like what happened in the 80s and 90s to their larger counterparts. The reason is that IT costs are now low enough to justify the investment in software tools by smaller organizations to help manage their assets. The average user is also a lot more tech-savvy than before and can take over responsibilities that used to be done by the CMMS developer (e.g., system configuration).

CMMS CLASSES
While the big players of the ERP world are currently fighting for new installations or upgrade contracts with large organizations, other vendors are focusing on small and medium sized companies since they are coming into the CMMS market in larger numbers than ever before. The current CMMS/EAM/ERP market environment can be summarized into three main classes:

• Class 1 CMMS refers to a pure computerized maintenance management solution that is a stand-alone software package that provides very basic equipment maintenance workflow, maintenance scheduling and simple reports. There is either very little or no asset component breakdowns.

• Class 2 solutions have an extra asset categorization/breakdown layer built on top of the Class 1 CMMS, essentially turning the CMMS into an EAM. These applications go a lot further in report depth and include inventory control, purchasing and financial data, which is a start in the move towards the use of a full ERP. Class 2 packages are also expected to have efficient multi-site and multi-user capabilities.

• Class 3 CMMS is an EAM module fully integrated onto an ERP.

CMMS CLASS 1.5
The highlighted area in Figure 2, Class 1.5, is where the current CMMS vendor challenges lie and where the CMMS world is expected to see the most profound changes in the next couple of years.

Get more out of your motors.
SKF electric motor test solutions extend the lives of the motors that drive your business.

Call 1-970-282-1200, visit us online at www.bakerinst.com, or scan the QR code below to learn how SKF’s NetEP Online Motor Analysis System help maintain the health and performance of your organization’s critical motors and machine systems.

The average user is also a lot more tech-savvy than before and can take over responsibilities that used to be done by the CMMS developer
Class 2 and Class 3 markets are established with enough options of reputable vendors, while the Class 1 market is not technologically complex, meaning the requirements can be easily implemented by software developers with no maintenance concepts knowledge. This leaves an unexplored area of opportunity containing a large number of companies that require more functionality than a basic CMMS can provide, but have no need for the complexity of a full EAM.

**CMMS CLASS 1.5 FEATURES**

The companies that fall into Class 1.5 should prepare for what are probably unavoidable strategies by CMMS vendors that will shape the type of options available to them in the near future. Table 1 summarizes some of these options, along with comments on what they mean to potential customers. It is easy to see that the features specified in Table 1 come from the desire to decrease costs in a move that benefits both vendors (that now have a cheaper product to sell) and customers (that now have a resourceful tool at a cheaper price).

**CHALLENGES**

The challenges that need to be overcome to allow for faster, widespread use of the Class 1.5 CMMS rest in the mind-set of decision makers. Technical solutions, like shared servers and cloud computing, are all well-proven, but need to be deeply understood and accepted by managers.

Class 1.5 companies are rather special in that they come from a Class 1 category with staff that saw a company grow using techniques that they now find difficult to let go of because they have worked in the past. Realizing that they are now on another level and the required tools need to be different is not an easy step. It’s not the cost of the Class 1.5 CMMS anymore, it’s the mind-set that keeps users stuck to a Class 1 solution.

**CONCLUSION**

The features of the Class 1.5 CMMS make perfect technological and financial sense. Because of this, they will overcome the challenge of change resistance and become the standard for CMMS implementations in the foreseeable future.

---

**TABLE 1**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Why?</th>
<th>What It Means?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software will be completely cloud-based, with no local computer or local area network (LAN) options.</td>
<td>More powerful hardware may now be shared among several customers, making it a lot cheaper per user to purchase, operate and maintain.</td>
<td>Better and cheaper service since professional and experienced suppliers will now be taking care of better machines. Server uptimes of 99.999 percent are common in the industry. No need for dedicated IT staff.</td>
</tr>
<tr>
<td>Software will be completely user-configurable.</td>
<td>Vendors will cut costs as they do not use the time to configure systems.</td>
<td>Vendors will make the software easier to configure.</td>
</tr>
<tr>
<td>Software will be non-modular (not because it won’t have different components, but because those components won’t be charged extra).</td>
<td>Vendors will push for simplified payment options – modular options would complicate that process.</td>
<td>Companies get more functionality as it is being added to the core program.</td>
</tr>
<tr>
<td>There will be minimal direct vendor customer support.</td>
<td>Vendors will cut customer support costs.</td>
<td>There will be a push for user-driven forums that will allow the user community to support itself.</td>
</tr>
<tr>
<td>There will be no customization.</td>
<td>Vendors will have a one size fits all approach to their offers. This decreases development costs.</td>
<td>Companies will have to compromise and adjust some procedures to the CMMS instead of the other way around.</td>
</tr>
<tr>
<td>There will be only online training materials and no on-site training programs.</td>
<td>Vendors will cut customer support costs.</td>
<td>Companies will be responsible for their own training programs.</td>
</tr>
<tr>
<td>Fees will be structured on a simple cost per user per month basis.</td>
<td>Vendors will push for simplified payment options.</td>
<td>Companies have the flexibility to pay as they go.</td>
</tr>
<tr>
<td>Mobile access is built-in.</td>
<td>Current Web technologies allow the development of desktop and mobile versions almost simultaneously from the same source code resulting in development costs reduction.</td>
<td>More access options for companies. Increase mobility and job efficiency without having to pay more for it. Data available from anywhere at anytime.</td>
</tr>
</tbody>
</table>