

Determining Client Needs: An Interview With SKF's John Yolton

Written by Terry Wireman, Editorial Director
Saturday, 01 October 2005 00:00

Using the right "tools" to evaluate asset management improvement potential.

We recently had an opportunity to discuss benchmarking and asset management improvement techniques with an acknowledged expert in the field, John Yolton of SKF.

MT: Everywhere we go, maintenance professionals are talking about "benchmarking." Why is it that so many companies seem to be obsessed with these numbers today?

Yolton: As anyone who has responsibility for asset management can tell you, comparisons abound within and across industries. A human trait for most people is to compare ourselves with others, therefore we are always going to want to be placed somewhere on a scale. In many cases that means a "world-class" scale.

Achieving world-class or best-in-class performance is the real goal. The gap or rather, closure of the gap, between a client site and world-class performance is the key to successful use of the benchmarking tool.

World-class indicators will always be moving targets, as they should, but they should also be a goal for which to strive, and around which to build a vision and a justification for a client site's improvement effort.

MT: How do you address these issues at SKF?

Yolton: SKF Reliability Systems has developed a model of the Asset Efficiency Optimization (AEO) philosophy. The AEO process starts with development of maintenance strategies for equipment and processes at a client's site based upon the business goals of the site. SRCM is one tool used for this development. Once these strategies have been created, whether it's a PM task, or run-to-failure, the next part of the improvement process is to identify which work makes sense to perform, in order to meet the site's business goals. Condition monitoring is a tool used for identification of necessary work.

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Controlling the identified work is the next logical step in this improvement process. Generally, this is enabled by the deployment of a computerized maintenance management system (CMMS) and includes alignment with the client's spare parts inventory.

Execution of the identified work is last. Contributing elements to this part of the model include skill levels of your personnel or outside contractors, expectations for the degree of quality of tasks performed by the client's personnel or contractors and measurements of work quality, among others.

As with any process, occasional unexpected issues will arise following the completion of the tasks at hand, which then warrants adjustments to the overall program. This feedback, whether in the form of an adjustment to PM frequencies or actual inspection tasks, for example, is referred to as the "living program."

MT: It seems as though there is quite a lot to this improvement effort. In fact, to many companies, it may feel rather overwhelming. How would a company get started?

Yolton: Any improvement process begins with identification of the client site's current state or present situation to help determine the gap between the existing situation and the future state or goal, which is depicted in the maintenance maturity diagram in Fig. 2.

In this diagram, the four stages of maintenance maturity are shown as Firefighting, Maintaining, Promoting and Innovating, each with its own individual characteristics of drivers, behaviors and reward systems.

As an example, it is not at all unusual to come across an organization that has developed excellent responsiveness to breakdowns, thereby minimizing the downtime associated with a failure. This type of organization typically flourishes with "heros" who are recognized by "attaboy" pats on the back and rewarded with extensive overtime opportunities.

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At the other extreme is the innovative organization that has grown far beyond the mentality of merely fixing failures quickly. It has become proactive in eliminating root causes of potential failures, sometimes as early as the design phase, and it certainly uses redesign as an option for failure elimination. This type of continuous improvement includes a very active, structured and ongoing learning process.

MT: I can see how that might help a company understand where they are at in a relative sense. However, does the process get more specific? It doesn't seem that this provides enough detail to start the improvement process.

Yolton: You are correct. When a client is ready for its specific improvement process, there is a tool for determining the site's particular needs for improvement. It's the Client Needs Analysis (CNA) and it's based on the SKF Asset Efficiency Optimization (AEO) model explained earlier.

For each of the concept's four facets, e.g., Strategy, Identification, Control and Execution, 10 carefully crafted questions are posed. The client's responses to these questions are then compared to world-class best practices benchmarks that have been publicly presented and/or published by a variety of recognized organizations.

The answers to the 40 questions are quantified, based upon a scale derived specifically for each question from the world-class benchmarks noted above.

This "scoring" is provided in order to properly position the site's current state within the four stages of maintenance maturity shown in Fig. 2.

The tool then provides a maturity matrix of the responses provided (Fig. 3). This matrix is invaluable in positioning the site's focus for improvement efforts in that it helps personnel understand where their maintenance effort is in relationship to world-class asset optimization.

The maturity matrix aligns the scores with the four facets of the AEO concept and the maintenance maturity of the client's organization, thus allowing analysis for developing an action plan for improvement. Further analysis is possible by comparing the organization's

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response to those of its peers within their own industry or across others.

MT: This seems to get into what you mentioned earlier about it being human nature to compare ourselves with others. Most consulting groups have problems here since the databases they keep are not comprehensive enough to give a true industry representation. How do you overcome this problem?

Yolton: I admit we had that problem at first, too. By now, though, SKF has conducted over 500 individual site analyses covering five broad industry categories:

- Pulp & Paper & Forest Products
- Industrial – Discrete
- Industrial – Continuous
- Hydrocarbon Processing
- Electric Power

Each analysis remains confidential within the SKF database, which is accessible only by authorized SKF personnel. Moreover, for reporting purposes, only the analysis number is used for identification.

MT: Could you give us an example of how the data is used?

Yolton: Here is a typical scenario. from the database of responses from pulp, paper and forest products (P&P&FP) surveys performed thus far (over 70 global responses). The question we asked was: "Considering all Preventive Maintenance (PM) tasks, how many are conducted by the operators?" (This is Question #16 of 40 and it is grouped in the Identification facet of the AEO concept.)

What we found was that the practice of using operators to perform PM tasks is not widespread within the paper industry. Only 10 percent of the re-sponses indicate a world-class best practice of having more than 25 percent of their PM tasks performed by operators, while more than 40 percent indicate they have no operators performing PM tasks.

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The CNA also provides other graphic depictions of the site's current state. For example, among the helpful graphic comparisons the CNA produces is a spider chart that shows the composite average response for each question for the P&P&FP industry. This allows us to compare the client's response values to the industry. Other industries can be similarly displayed for cross-industry comparisons.

MT: What analysis could you draw from this type of data and diagrams for this client or market segment?

Yolton: In very general terms, in the P&P&FP industry, there appears to be ample opportunity for improvement in the Execution phase of the asset efficiency optimization process. This involves the training and skill levels of your technicians, as well as the level of testing and acceptance of the work performed. As an industry, Questions 31-40 reveal, on average, that few of our global responders are actively engaged in upgrading the execution of reliability improvement tasks.

The CNA supplies a spider chart of each site's responses as well, so that it becomes more obvious where the strengths and weaknesses lie in an improvement effort.

Using data from our P&P&FP example, we can see that value of the scores for each facet from one specific site is quite high compared to world-class best practices in 21 of 40 questions. We also note that this site has particular strength in the Identification facet. Thus, we know that this site's improvement action plan will focus on the obvious improvement areas, e.g., Strategy and Execution.

That, quite simply, is the value of the CNA program. It allows development of an action plan that focuses on the needs of a site. It also allows clients to determine their position relative to the average of the industry for each response. This leads to the refinement of the client's improvement program based upon comparisons to the industry's average.

Each regional SKF office (over 80 worldwide) has personnel trained to assist the client in performing this analysis. In many cases, industry specialists can be used to review the

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responses and suggest recommendations for improvement. Generally, a benefits value can be included.

To become better, each organization must know where it is starting. This Client Needs Analysis (CNA) process not only defines the starting point, it also helps guide the improvement plan.

MT: John, thanks for helping us understand the details of how one company is helping move its clients to maintenance and asset management best practice maturity.

(Editor's Note: John Yolton is Maintenance Strategy Consultant for SKF's Global Pulp & Paper Segment. He has over 23 years operating experience within pulp & paper and over 17 years of management and consulting experience with companies specializing in engineering, lubrication, sealing and CMMS/EAM solutions. He can be contacted directly at john.yolton@skf.com .)