Three organizational models—one may be right for you.

Most large, multi-plant companies have launched a maintenance council in the past decade. While some have achieved significant success, most are still floundering for direction and concrete results. What are the differences that make some successful and some status quo?

There are a number of models we have observed that work successfully to add value to a multi-plant company. They include networking and competency development, coaching for change, and agents of change. These models are outlined in the section Council Models Compared. Although designed for multi-plant companies, some of the concepts discussed here can be adapted to a plant maintenance leadership council.

Whichever model applies to you, there are three phases in a council lifecycle: initiation, growth, and maturity. Successful completion of each phase is a prerequisite to move to the next one.

Initiation phase

Our objective in initiating the council is to structure it for long-term success. The consequences of failing here is a council that is not respected, has no cooperation from the rest of the manufacturing community, and fades away into that sunset of committees unable to create value. So all efforts here should be directed toward a successful launch. The following issues are critical to a successful beginning:

- Top leadership must endorse the need, the goals, and the methods of the council.
- A champion of sufficient stature needs to make a priority of establishing the council.
- The council leader must be respected as a doer, probably the person who is too busy for this job. Experience shows that other things being equal, it is better if the leader comes from production rather than maintenance.
- The structure of the group needs to support ongoing scrutiny and visibility, and show a willingness to be accountable for its actions.
- The council must represent production in a significant manner, if necessary to the exclusion of maintenance staff. If possible, get more than one representative per facility to ensure continuity if people change jobs often. Get involvement by a balanced group (including maintenance, production, engineering, staff), and don't be afraid of having hourly involvement. It may take more time at this point to achieve union or hourly ownership, but it will pay off in implementation.
- The council must be seen as action- and goal-oriented, and can't spend its start-up capital (goodwill in the formation of anything new) by having meetings that don't seem to get

anything done.

- Certain methods and deliverables will yield success. These include developing a charter, developing an estimate of value to be captured, and developing a communications plan.
- The council must identify how group funding will work, both for the time and travel expense, as well as any outside services.

Delivering value

Three successful internal maintenance consulting organizations we have known or been involved with (Rohm and Haas, DuPont, and Alcoa) have greatly simplified the identification of value. Each uses a single measure for maintenance cost and product throughput. While each uses a slight variation of definition, they come down to this concept: Cost is measured as Maintenance Expense as a Ratio of Replacement Asset Value.

In some industries this is routinely benchmarked, especially in refining, where the Soloman Study is a standard measure that a majority of companies use to gauge their performance. In others there may be no standard of performance and even measuring Replacement Asset Value (RAV) is difficult to determine. So the council needs to involve the company's accounting department to assure a consistent measure of maintenance expense among all plants exists, and secondly that there is a consistent means of valuing RAV. This is sometimes taken from the Maximum Probable Loss calculation of the property and casualty insurer if no better measure exists.

Throughput, or capacity utilization, or uptime, or overall equipment effectiveness (OEE) measures how well the plant is making use of the inherent utility of the equipment assets under management. Each of these measures can be tied to a financial amount.

A concern on this point is that sometimes only a small amount of downtime is mechanical or unplanned. The council needs to decide if all sources of downtime are going to be reviewed, or only those directly affected by maintenance. For instance, sometimes a plant is not sold out, or is sold out seasonally; whatever result the team and plant come up with needs to be justifiable, and owned by the plant leadership.

Typically, for a company whose overall maintenance costs might be $100 million, we have seen that 15 to 25 percent savings is available by meeting a reasonable expectation of performance by every plant. Capacity utilization can usually be improved by 10 to 20 percent as well, although we have been seeing steady improvements in many industries, especially those that routinely benchmark performance such as chemicals and refining.

Getting started in a way that creates enthusiasm, support, and expectations of good things to come will make or break the overall effectiveness of the council. We would suggest that from the first meeting of the council, no more than 12 months pass before beginning work at a plant site.

Growth phase

Having successfully gained the attention of leadership, recruited movers and shakers to the council, and created the structure for success, it's now time to begin meeting expectations. That means successful change at a plant location.

It will be clear early on that there are three types of plant managers the council will deal with. First, and most apropos to this section, is the leader who welcomes improvement, seeking out methods and sources to continuously make his plant more effective. Second is the plant manager who is in trouble and knows he needs to do something to improve because his money or his job is on the line. Finally, there is the plant manager who wants no part of this program. His reasons may be several: he has too much on his plate already; timing isn't good because of construction or a turnaround; the plant is already very good and does not want or need corporate interference; or the plant does not want to expose itself to measurement and comparison because it won't look very good.

Where do we start? The Golden Rule in corporate life is that first impressions will last forever. That means there is only one chance to do this right, to make a positive difference, and for the work to be viewed positively (these are not quite synonymous). So we begin by looking for a site champion with these characteristics:

- The potential champion is considered successful already; his patina of success will rub off on the council's activities.
- Potential champion knows how to run projects, how to take the personal interest necessary to make things successful.
- There is a defined business opportunity whose scope is neither too small to matter, nor too big to be an unqualified success..
- This project is personally and professionally important to the plant manager

Next the council needs to have a method to proceed. One very important deliverable from the initiation phase is an assessment method and an implementation method. Rohm and Haas used an outside maintenance consulting firm to help create an assessment methodology and an implementation approach(es). DuPont embarked on a global maintenance cost benchmarking study with a consulting firm. So this is a proven way to get started.

Getting plant ownership goes beyond the plant manager's support; before starting, the entire leadership team will need to understand the outcomes, the resources required, and any out-of-pocket costs associated with the project. There needs to be a workplan, sample documentation, and delineation of responsibilities.

Typical results of implementation are cutting overtime in half or more; reducing contractors to only specialty work; and improving availability of specific equipment centers by as much as 10 percent. It is true that getting to these levels may require 6-12 months of continuous support, but without such results the maintenance council is seen as little more than a group who meets and accomplishes very little.

Most plant managers dream of these results. A plant manager who has made the effort and gained the results becomes a strong council advocate to his peers to invest in similar efforts. The role of the council is now to assure that its success is presented across the company, preferably by people from the successful plant itself. This sets the stage for the next phase, maturity.

Maturity phase

Sometimes the greatest predictor of failure is success. A great deal of time and attention go into the initial effort to produce great results at the pilot plant. There is a tendency to forget these lessons and to relax.

The pilot plant was chosen because of its strong leadership and bias for measuring results and holding people accountable. Less able plants will now come forward looking for similar results but without the full understanding of what it takes to change that was demonstrated by the pilot.

How does the council overcome this barrier?

The answer has several parts. First is to document the methods and lessons employed to get the results the first time. The path has been developed, and it can be improved each time the group goes to another site to work. The second factor for success is to continue to work with volunteers who have demonstrated successful ability to change. In other words, keep stacking the deck as much as possible.

A third factor that appears to be vital in institutionalizing change is the creation of an internal consulting organization, dedicated to guiding change at the plant level. Essentially the group becomes semi-professional, with the ability to:

- Develop and execute marketing strategies.
- Develop and refine methods.
- Create relationships among field managers.
- Recruit within the company for those individuals who can lead change.
- Attract a permanent funding method by reselling its services.
- Work on new problems and situations throughout the plant.

Both DuPont and Rohm and Haas have developed an internal consulting capacity to meet maintenance and reliability opportunities head-on. In doing so, they created a new language and awareness within senior management in their companies. As the understanding of the value to be created grew, management compensation programs were changed to reflect progress on maintenance expense and uptime.

An example of the best

Dick Pettigrew led the formation of Rohm and Haas' maintenance council. Most of the steps discussed here were steps he led. He had a champion, Tom Archibald, who is a manufacturing executive and a strong supporter of the program.

They learned by doing, experimenting, and tirelessly promoting their efforts both inside and outside of the company. They used consultants, engineering specialists, the Society for Maintenance & Reliability Professionals (SMRP), and other professional associations to educate the internal team. As time went on, Pettigrew relied less on outside experts and more on his own cadre of internal experts.

As their successes grew, so did their influence in the company. Getting additional funding for more positions wasn't easy, but by demonstrating and marketing results, they have become an integral part of their leadership's toolkit for change. More recently, the internal consulting group has been asked to take on other challenges of lean manufacturing, in addition to their work on reliability and maintenance.

With careful attention to methods and communication, a maintenance council can be a vehicle for change within your company. The results will easily be worth the extra effort, because so often we observe few results from a lot of hard work. **MT**

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Council Models Compared

The council's primary purpose is education—learning from each other, creating specialist teams, problem-solving, sharing practices, etc.

Advantages

- Low cost
- Builds organizational knowledge
- Increases technical skills
- Leads to functional improvements
- Can be done on a part-time basis

Limitations

- Slow to build value
- Strengths may not exist in company
- May not influence operations/engineering
- Knowledge may not be implemented

Coaching Model

The council sets up a direct assistance organization, leading member plants in assessing their gaps, and coaching for change.

Advantages

- Can lead to significant value creation
- Cost billed to plants that want help
- Creates examples of success
- Raises visibility of maintenance in company

Limitations

- Where to acquire and maintain skills?
- Change may be quite slow or nil
- Too limited assistance to drive change
- May not get high priority in plants
- Maintaining organizational visibility

Consulting Model

The council's primary purpose is developing a corporate plan and structure for change and significant value creation.

Advantages

- Highest value to company
- Works best with large number of plants
- Significant change agency for company
- Replaces need for external consulting

Limitations

- High cost
- High leadership and ownership requirements
- High skill requirements
- May lose staff to outside interests

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