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## How to Change from a Reactive Organization to a Proactive Organization

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I believe that the main driven force to change from a reactive Maintenance organization to a proactive Maintenance organization is to have the support and the direction from top to bottom. Management should not only commit to this effort, but it should assign a champion or even better a Reliability Manager that reports to the same level of the overall organization that the Maintenance and Operations Manager reports to. This manager should be a person with broad experience in Maintenance and Operations, and most importantly that each level of the organization recognize he or she as a key player in this effort. Now, once the reliability manager has picked the group that will be part of the Reliability Centered Team, the team should focus on the following tasks:

1. The team should begin their assignment by developing their Mission, Vision and the Strategies to achieve their Mission. As an example, the Reliability Department here at the refinery was created 11/2 years ago. We have members in this department from Operations, Maintenance and Engineering. The first thing we did was to develop our Mission, Vision and the Strategies. Then, each section of this department started working the details for each strategy within their responsibility. These are some of the strategies:

|                              |                               |
|------------------------------|-------------------------------|
| Technology                   | Training                      |
| Critical Equipment           | Leadership                    |
| Information System           | Capital Requirements          |
| Process and Equipment Design | Operations Driven Reliability |
| Communication                |                               |

2. We developed Key Performance Indicators (KPI's) for our Reliability group and we established goals that are quantifiable. We began tracking the performance of each goal on a monthly basis. To me the KPI's are very important, they indicate where we are in our effort and most importantly management likes to see charts, trend graphs and new initiatives that are triggered by the results of the KPI's.

Some of the KPI's we're tracking are:

- MTBF (Mean Time Between Failures)
- Bad Actors Equipment List
- Re-work
- Re-visit
- # Team RCFA's and # Technical RCFA's\*\*
- Repair Cost
- Unscheduled Shutdowns

*\*\*We have two categories for RCFA'S: Team RCFA for failures that cost > \$100 M/ year in maintenance and operations impact. Technical RCFA for failures that cost > \$40M/ year in maintenance and operations impact.*

We have developed electronic reports that extract data from SAP and manipulate the data to generate charts and trend graphs for statistical analysis.

3. We have also developed best practices for maintenance. We have documents to record repair data and we monitor the accuracy of this data on a weekly basis.
4. We support the operations and the maintenance departments in the way that we provide the reliability data and we recommend to them where to focus and what type of effort is required to decrease the number of failures, and the repair cost.
5. If it is possible, develop alliances with OEM's, vendor shops and consulting companies. Make them part of your reliability team. If your company succeeds they will make money. If not, they may lose a customer.
6. To me reliability starts from the design of the equipment. The installation, operation and maintenance are important issues, but remember if the equipment was designed unreliable no matter how good it is maintained and operated; it will remain unreliable until a re-design action is done. Be sure to document any re-design and get your equipment OEM involved in this design change.
7. Train the work force any time a design change takes place. Both Operations and Maintenance need to be aware of new features added to their equipment and what it would take for them to properly operate and maintain the equipment.
8. Create a reward policy for areas of the company that improve reliability. Let's say unit "A" has increased MTBF 20% in the last 12 months. Well just reward their team members with a small token of appreciation from the company and also recognize their achievement throughout the company. This will create a good competition among the other units.
9. If you have an Intranet, create a page for Reliability where you can display charts, trend graphs and new best practices that people need to know.

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### **These are some of the most important characteristics of this team:**

The Reliability Centered Team should be a cross functional team. Members from Operations, Maintenance and Engineering should be part of the team.

Good knowledge of the organization, the company culture and the process are keys to have a good start of this team.

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