

Change Management for Maintenance and Reliability Professionals

By **Steve Thomas** - Author *Cultural Change for Maintenance and Reliability Professionals*

Originally presented at IMC-2006 The 21st International Maintenance Conference on the web at <http://www.maintenanceconference.com>

When we think about creating a reliability focused organization we tend to initially think about what needs to be changed. This process invariably leads one to determine that there are components of the current process that do not exist and hence have to be created, or if they do exist they may not be functioning to the level we would desire. For example in order to create a reliability focused organization a work planning and execution component would be required.

With these elements in place, the work could be planned, scheduled and the work crews effectively and efficiently deployed. If these parts of the work process were lacking they would have to be created, people trained and the end product deployed.

The problem is that while the planning, scheduling and work execution improvements may prove successful over the short term, long lasting change is highly unlikely. The reasoning for this failure can be attributed to the fact that the change effort is not addressed at all of the necessary levels within the overall change framework. By creating improved planning, scheduling and execution functions we are addressing what is referred to as the "hard skills" of the process of change. For change to be long lasting we must also address two other distinct levels of the change model.

The first of these two levels is referred to as the level of "soft skills." This level is composed of eight distinct elements called the Eight Elements of Change. They include; leadership, work process, structure, group learning, technology, communications, interrelationships and rewards.

Each of these elements is important for a successful change initiative on their own, but they are even more important when considered as a collective whole. Recognizing the importance that these elements play both individually and collectively in the process of change is very important to a successful outcome.

Think about the first of the eight elements - leadership. This element is extremely important on its own since leadership is the driving force of any change effort. However consider the power that sound leadership can bring to the change process if it is closely coupled with improvements in the other seven elements in the change model. All too frequently these are never considered when a firm is implementing a change initiative yet without careful consideration of all eight, both individually and collectively, change will be difficult to implement and even more difficult to sustain.

There is one more level below the level of soft skills. It is the foundation of every successful change initiative and the ultimate root cause of every change initiative that fails to achieve its desired end in either short or long term. This is the level of organizational culture. Without carefully considering this foundational level, the roots of the change initiative never will take hold and long term success is unlikely.

At this point an example is in order. Suppose that your plant decided that the reliability of their rotating equipment was poor and needed to be vastly improved if the plant was to remain competitive in the market that it served. To achieve this higher level of reliability the plant management decided that a preventive maintenance program (PM) would be an

excellent beginning. This process would enable time-based repairs to the equipment as opposed to the current reactive repair process. They recognized that it was neither effective nor efficient use of their maintenance resources to address equipment problems with the quick (not reliability focused) fix.

Also suppose that the plant leadership was not only familiar with the "hard skills", but they also were very aware that the "soft skills" needed to be brought into play if they wanted to have a successful outcome. As a result they addressed the eight elements of change as follows:

- Strong leadership was provided by assigning a senior member of the maintenance staff full time to develop and implement the PM process.
- A detailed work process was developed clearly indicating all of the required PM tasks and who had responsibility for their performance.
- A separate PM planner, foreman and work crew was established to assure that the element of structure was in place.
- Group learning was addressed by hiring experts to train the PM team in the latest techniques. The PM work process was also built to assure that feedback was provided from each job to ensure that the effort was continually enhanced.
- The element of Technology was addressed by purchasing the PM module of the currently used maintenance software. In this way the work could be efficiently and effectively planned and scheduled.
- Communication of the process took place all throughout its development and deployment so that everyone in the plant knew that something different was being done to improve reliability.
- The team felt Interrelationships were critical because they believed that an effective process needed involvement from Production, Maintenance and Reliability Engineering. As a result representatives from each of these departments were included in the process design as well as playing critical roles in the actual process as it was deployed.
- Rewards were put in place so that those who supported the process during and after deployment would be recognized for their efforts.

When this process was rolled out it was initially very successful. Over time, because of his leadership roll and resultant success of the program, the manager who developed it was promoted. His successor was not an advocate of PM. He had advanced during his career by being the best "rapid responder" to Production's problems in the plant. Nevertheless plant management felt that it would be a good developmental assignment, and that all of the predeployment work would sustain the process over the long term.

After the new manager took over the process continued to function smoothly for the next several months, but then something very noticeable happened. At first the PM crew was pulled away from their PM duties to work on a plant outage. When it was concluded they returned. Next they were pulled away to work on a highly important repair and again they returned, but not as quickly as before. These situations continued until one day they were pulled away once again and they never returned. This was the demise of the PM program. What had been started with such high hopes and great success had ended in failure.

What this example provides is evidence that employing both the "hard and soft skills" to the change initiative is not the final answer. There is a foundational level below that of the "hard

and soft skill” levels that must be addressed if a change initiative is to be truly successful over the long term. This three tiered model is shown in figure 1.

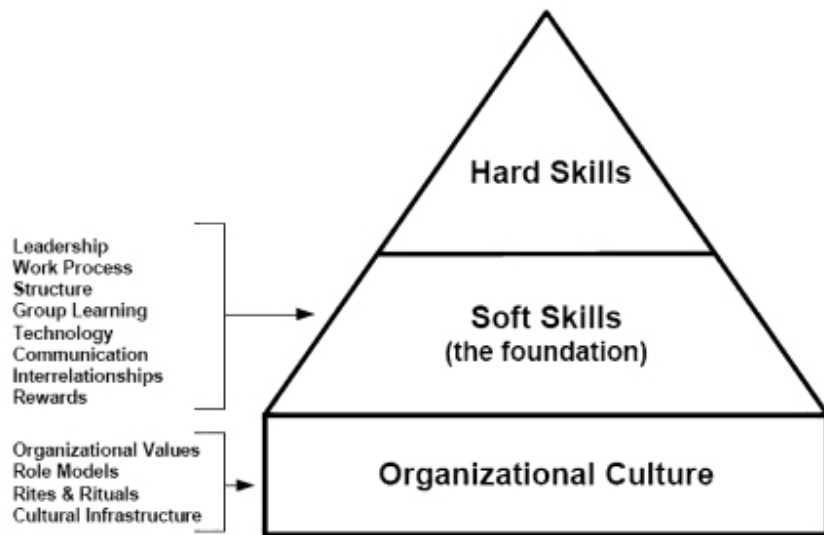


Figure 1

This foundational level is referred to as the Organizational Culture. Failure to make the necessary changes at this level will cause any initiative to fail over the long term. While our PM example is very simplistic in nature it describes what ultimately happens to change initiatives which do not include changing the culture of the organization.

The foundational level of change - the Organizational Culture - is composed of four elements which we will refer to as the Four Elements of Culture. These elements include:

- Organizational Values
- Role Models
- Rites and Rituals
- Cultural Infrastructure

Organizational values are those basic beliefs that an organization has tested over time and collectively holds to be true. As a result when issues arise that require decisions that will dictate performance, the organizational values are the governing force that directly influences the ultimate outcome. In our example if the organizational values were reliability focused, the PM crew would never have been pulled from of their designated duties to other work. When questions about resource availability arose, staffing for outages or other large projects would have been obtained elsewhere – not from the PM crew!

Role models are those people at various levels within the organization who people emulate when it comes to work performance. These are the people who have proven successful in the existing organizational culture and provide visible examples of how work is conducted that leads to successful outcomes. In our PM example the new manager clearly was modeling a non-PM focused process for work execution. By continuously reassigning the PM

crew to other work he and the management team he represented were modeling what was truly important at the plant, and it was not PM.

Rites and rituals include the work processes (rituals) and how we reinforce their behavior (rites). Rituals are what we do as part of our day-to-day work. In fact they are often so ingrained that we do them with little thought as to why. In essence they are "how things are done around here" if one wants to have a successful career. Rites are the reinforcing part of rituals.

An example of rituals and their reinforcing rites would be maintenance's reactive response to the demands of the Production department for immediate equipment repair and interruption of the scheduled work. This form of reactive response is most often followed by immediate praise for a job well done. The response is the ritual and the reinforcement the rite. If the PM foreman and the PM crew had successfully worked in the reactive maintenance and immediate praise mode they would not object to being pulled off of the PM assignment. In the PM process, the rituals would have been new and uncomfortable and the rites far different than their prior experience in reactive maintenance. Consequently a return to their comfort zone would have been appreciated.

The cultural infrastructure is the hidden organization within the organization. It is the unofficial manner in which information (valid or invalid) flows throughout the organization. It is also the way that people are influenced to behave within the context of the organization's culture.

Change can take place without addressing the cultural infrastructure however doing so ignores the significant influence that the cultural infrastructure has within the organization.

The seven elements of the cultural infrastructure are as follows:

- Story Tellers are individuals who promote the existing culture by telling work related stories. While on the surface these stories often appear to be a waste of time and off topic, they are clearly informing those listening how the culture expects people to act.
- Keepers of the Faith are the people who serve as mentors for the organization. By mentoring new employees they serve to protect the culture by showing everyone how things are expected to be handled.
- Whisperers are passers of information behind the scenes most often to those in position of power. Whisperers have the ability to pass information that you or your work team may not want passed. While the whisperers feel a sense of power by having this unique access they can cause great disruption if not controlled.
- Gossips make up the hidden day-to-day communication system. While it is an unofficial means of communication a great deal of information is passed throughout a company in this manner. The problem is that in a change process this information could be wrong or incomplete leading to speculation and disruption of the effort.
- Spies are passers of sensitive information to those who may or may not need to know. Having a spy in your midst that is passing information to those who should not have it can cause many problems. Information passed in this manner often leads the receiver to the wrong conclusion and the change team to a great deal of unnecessary work to address issues that would not have to be addressed otherwise.

- Symbols and language are mechanisms for conveying what and who is important. Both of these cultural infrastructure elements dictate who is a part of the group, and who is not.

At a meeting when a team uses acronyms and terminology only understood by the team with other non-team members present it is immediately clear who is part of the group. These two elements are barriers that must be addressed since they tend to break down organizations into definitive groups.

As you can see the various aspects of the cultural infrastructure play an important role in the change process. If they are not addressed they can severely undermine or destroy the change initiative that is being put in place. However, if addressed proactively they can be used to support and sustain it.

What needs to be recognized in any change effort is that all three levels of the change model must be addressed for success. If a change initiative does not address them all, the outcome will ultimately will fall short of the organization's desired result.