

FACILITATING CULTURAL CHANGE IN PREPARATION FOR COMPUTERIZATION

by

Robert L. Steibly, CPE & Certified Senior Consultant

STEIBLY & ASSOCIATES

The acceptance of computerization of a facilities organization cannot be accomplished without effecting a change in the culture of the facilities/maintenance organization. That necessary change is a subtle, often slow, process relative to the mechanics of physically implementing computerization and is the single greatest factor for success. The cultural change must begin at the highest levels in the organization. The use of the word “organization” in this paper refers to a facilities or maintenance organization while the use of “business” refers to the entire business organization at the particular site.

To enable that necessary change in the culture, six major areas must be effectively addressed. Those are:

- **SETTING BASELINES**
- **ASSESSING THE ORGANIZATION'S READINESS FOR CHANGE**

- **DEVELOPING STRATEGIC AND TACTICAL PLANS FOR THE CHANGE**
- **DEFINING AND IMPLEMENTING A COMMUNICATIONS PROGRAM**
- **PROVIDING LEADERSHIP AND TEAM BUILDING**
- **MANAGING CHANGE WITHIN THE ORGANIZATION**

The actual computerization of any maintenance organization, in other words, the installation of a computerized maintenance management system (CMMS), is the easiest part of the real implementation and, also, the smallest part. To properly implement a CMMS requires laying the groundwork twelve to eighteen months prior to loading the actual software. To lay the groundwork in a shorter length of time greatly increases the risk of a failed implementation accompanied by poor morale and poor data collection.

It must be kept in mind constantly, also, that those people being affected by the computerization implementation, the real end-users, have fears of change that must be addressed. What will it mean to them in their jobs? What is in it for them? There are issues of trust. Do the employees trust the leader, and does the leader trust his or her employees? On a tangible level, the employee will ask what is in it for him or her; what is the compensation for the employee?

Implementing a CMMS is not unlike Business Process Reengineering or BPR in any organization. Many of the words used to describe the BPR process and the issues facing it are not unlike those facing an organization about to enter the CMMS arena such as power, training, turf, morale, rate of change, resources, compensation, trust, communication, recognition, commitment, leading by example, fears, etc. Implementing a CMMS is no less daunting than entering the BPR process. In fact, there are many more similarities than not.

SET BASELINES

Upon formation of the project team, one of the first chores to address is to set baselines from which to measure the progress of the CMMS implementation as the months and years unfold after going live. Beginning this process forces the team to determine the most important issues for the organization. Those issues must then be converted into measurable criteria from which to measure the ongoing performance. It is surprising just how many organizations will go through a significant change, as it does with a new CMMS, without knowing where they are in the beginning. Knowing where you are now sets the baseline. This is not a difficult, but one too often overlooked. The excuse given usually is that we know where we are today. However, when asked to quantify it, people cannot.

Baselines must take into account the goals of the organization, the needs, and the pluses or positives internal to the organization. External to the

organization, the goals of the business must be considered as well as the business needs which may be impacted by what the organization does, and any external perceptions of the organization.

Once the goals both internal and external to the organization are clearly understood and clearly defined it is then time to try to qualify and quantify them. The first of these steps is qualifying the identified internal and external organizational needs and includes prioritizing those needs. Prioritization of the needs is accomplished by determining the criticality of each for the organization and the business. Upon completion of this task select the five or six top issues and quantify each of these.

Quantification is not difficult, but takes time and thought as well as much discussion among the team members. Each issue, to be an effective baseline measurement, must be clearly measurable and understandable. This means defining very specifically what the baseline measurement is so everyone understands what makes up that measurement, what the data is, the formulas and calculations used, and what are the exceptions or discrepancies in the data. All too

often baseline measurements are loosely defined prior to implementing a CMMS. Also, the data collected to use is not clearly understood and is tainted or incomplete to the extent that measurement against that particular baseline is not meaningful to the measured progress with the CMMS as the months and years progress. For example, if overtime is to be used as a baseline measurement, then all should clearly understand what makes up the overtime to be measured. Does the overtime include all overtime for the organization for salary and hourly; does it include custodial; does it include security people; is overtime data obtained from finance based on actual dollars paid including straight time wages, overtime premiums, and associated fringe benefit costs? Until each baseline measurement is understood by all team members in detail, the definition and quantification of the measurement is incomplete.

Once baseline measurements have been determined for each of the critical issues facing an organization implementing a CMMS, each of those must have charts, graphs, or tables developed to present and track progress. The best baseline measurements are simple to

explain and to understand and tracked in such a manner that everyone interested can easily see the progress being made. Five of six baseline measurements are all that are needed to effectively track the progress and identify areas of concern to address as the implementation proceeds. More measurements just tend to cloud the issues and confuse people. Some simple but effective baseline measurements are:

- Overtime percentage calculated monthly by all of maintenance, crew, or craft based on actual hours worked or dollars actually paid to employees
- Weekly trend of open work order manweek backlog by all maintenance, crew, or craft
- Monthly performance to budget goals in the areas of maintenance parts and overtime premiums
- Weekly trend of percentage of planned work to total work done by maintenance

Critical to any measurement, again, is to clearly understand what makes up the data and formulas. For instance, in

tracking percentage of planned work, a very clear definition must be made of what "planned work" is within the particular organization. Even within an organization the definition will vary from person to person. Setting the baseline measurements forces everyone to better understand their business and organization and forms the basis for developing procedures for how the organization will function under the CMMS.

ASSESSING THE ORGANIZATION'S READINESS FOR CHANGE

It is critical for the leader to conduct sensing prior to, during and after the CMMS installation of his or her organization to effectively lead. The best sensing is done on a casual basis in such a manner that the people in the organization are not obviously aware that they are being sensed. There are a number of methods that can be used to effectively conduct the sensing among which are simply walking around and engaging people at all levels of the organization in conversation. This approach is casual, non-confrontational, and

is done on the employee's own "turf".

Another approach is through meetings. Dialog meetings are excellent for any managers to use to communicate with their hourly workforce. These meetings are typically held between the manager and small groups of six to ten craftsmen without any other managers or supervisors present. The intent is to allow for an open dialog between the top manager of the organization and the craftsmen. Allow about one hour for each meeting and hold the meetings on the employees' normal work shift i.e., if the meeting is with third shift craftsmen, then it should be held at the beginning or end of their shift or such as 11:30 PM or 6:30 AM. A schedule for dialog meetings can be set far in advance and attendees scheduled for each meeting. However, those who may not want to attend should not be forced to do so. Leave the meeting open and non-confrontational. Discussion can center around general business issues, discussing issues of particular interest to the craftsmen, and also allow for the opportunity for the manager to begin presenting information about what a CMMS is and what it can and will do for the

craftsmen in their daily work. These meetings, if kept open and honest, can shed a great deal of light on the general mood of the organization towards change and their acceptance of it. It is a valuable mechanism for the manager and leader of the transition to a CMMS to use to help guide the process.

Following the concept of the dialog meetings, the manager can use staff meetings with his or her salary staff to garnish the same type of information in terms of sensing their readiness. Perhaps, not surprisingly, the manager will find that there is more apprehension and resistance to change in the salary ranks than in the craftsmen ranks. A CMMS, if properly implemented and used, provides more information and, hence, daily control with the craftsmen who can use the CMMS to do their jobs more efficiently and effectively without the aid of a supervisor as in a non-CMMS environment.

External to the organization implementing a CMMS, the manager should conduct some informal sensing for business perceptions to determine if the business, in total, is receptive to change as well as does the business perceive the

organization being receptive to change? A business not receptive to change may not look favorably upon an organization changing to implement a CMMS. This being the case, road blocks can be thrown into the process greatly hampering the entire CMMS installation. It is much better for the manager to be aware of any tentative, outside resistance to allow the communications program to address those concerns external to the organization which could negatively impact the implementation.

DEVELOPING STRATEGIC AND TACTICAL PLANS FOR THE CHANGE

Strategy and tactics are two entirely different approaches. Strategy is a long term plan or goal perhaps three to five years or longer into the future, and tactics are the short term plans necessary to achieve those long term strategic goals.

To develop the strategy for the organization the manager must first understand the business's strategy and then review the current vision within the organization (whether that vision is clearly understood or not,

every organization does have some vision). Conceptualizing the strategy / goals for the organization can be done by the manager initially through sensing of the organization and the business in conjunction with the business's and organization's objectives and what the manager envisions a CMMS will do to help the organization and business. The strategy should:

- reach out three to five years
- be based upon issues, sensing, and baselines
- restricted to no more than five or six items
- be clearly identifiable, quantifiable, and focused
- be realistic for the organization and the business

Upon completion of the conceptualizing of the organization's strategy, the manager should review it with the employees for comments, changes, and suggestions. It is beneficial to share the organization's strategy with the business external also to gain the business's concurrence prior to attempting to enter the tactical planning phase.

Tactically, each of the strategic goals should be broken down into segments and a plan developed for the implementation of each segment with associated timing delineated for each. It is further necessary to conceptualize who will do what and when. This is the opportunity to capitalize on the use of Gantt, CPM, PERT, or other project planning and scheduling tools for each of the strategic goals.

At this point the leader / manager may want to consider how much of the tactical plan will be conveyed to others within the organization. Those critical issues for success should be clearly identified at this stage. Critical issues are often perceived potential issues or complaints that may arise from within or outside of the organization which should be addressed and resolved during the communications stage being sensitive to people's reservations and fears while also not intimidating people. This point is mentioned since it is often the apparently minor issues revolving around individual's reservations and fears which turn out to be the major obstacles to a truly success CMMS implementation. It is precisely these issues which the manager / leader must be

aware of to properly address them. Often the addressing of these reservations and fears are not the type of issues one wishes to advertise on a planning chart since they effectively involve manipulating people in a positive manner to effect change in the individual's behavior. In a day when team building, employee empowerment, job enrichment, etc. are the buzzwords of business, manipulation is a taboo word. However, manipulation is essentially directing and mentoring people towards doing something a different way without them realizing that you are the facilitator of that change. It is a very real and effective tool.

DEFINING AND IMPLEMENTING A COMMUNICATIONS PROGRAM

An effective communications program is critical to any successful CMMS implementation. Communications must begin as early as possible in the process. Well before even the investigation of CMMS's and the submittal of any appropriation requests for the funding. It is imperative that all people within the organization understand what a CMMS is, what it will do for them, what it means to them on

their jobs, and how the way the organization does business will have to change. Many tools are available to begin the communications, some of which have been mentioned earlier: Dialog meetings and staff meetings.

Other communications tools include just walking the floor and talking to people as well as the written avenues using newsletters, articles, memos, etc. It is important to keep those external to the organization informed as to what is going on with the CMMS also. The depth of knowledge they require, however, is much less than the actual end users in the organization need.

When developing a communications strategy consider that all communications should be non-confrontational. The purpose is to educate and inform people. Begin conveying the strategy or vision of the organization long before the CMMS implementation - twelve to eighteen months. Also, keep all levels within the organization informed, even if some people may not be affected directly; custodial services or security people for example. If anyone is part of the organization, then they should know what is going on.

To exclude them can only mean problems later due to misinformation and rumors. Make the communications available and accessible to all from the beginning.

Articles regarding the CMMS status published in bi-monthly or monthly business newsletters is a method to reach the entire business population. Not only are the articles informative, but survey questions can be asked, contests held, token prizes awarded to draw everyone's attention to what is going on with the CMMS and get more people involved with talking about it. Techniques such as a Name-the-System contest go a long way towards building ownership and interest in a new CMMS. The more those within the organization can be informed about the CMMS, its capabilities, and the status, the more they will feel a part of the process themselves and, hence, feel ownership towards it.

LEADERSHIP AND TEAM BUILDING

The best implementations are led by the highest level management person over the affected organizations. The time required for this person

is not excessive, but it is essential that this level of management be the advocate of the CMMS from the beginning of the process. More often than not, this highest level of management will delegate the responsibility for the entire CMMS implementation to another with less authority to lead a team. Thus begins the slide to a less than optimum implementation. This is not to say that the team and its leader are ineffective. Only that they do not convey the same message as the high level manager and do not have the respect of the position. Teaming is immensely popular in the United States today. Teams work and work well. However, the essence of a team is leadership. Leadership cannot be delegated to a team or a team "leader". Hence, it is imperative to success that the manager over the organizations, the "leader", be the project team leader.

Even prior to the formation of the project team, the manager / leader should begin laying the groundwork within the organizations for computerization. Beginning this process far enough in advance of the actual implementation precludes much of the internal dissension prevalent in many installations. Laying the

groundwork can be done, and should be done, in many ways. The most simple is just to begin talking to people in the organizations to be directly affected about planning and control within maintenance and stores. This can be accomplished easily and without much preparation in one-on-one, casual meetings with individuals, during staff meetings, and during dialog meetings with the craftsmen and others. The intent is to convey to those who will be affected by a CMMS the underlying reasons for moving to that level of control, what it will mean to the end users, and what is about to occur. If the groundwork is laid early enough those eventually effected will not develop a negative attitude towards going to computerization but will become strong advocates themselves.

People, including managers, cannot be made true leaders just by given a title in a business. Some people will never be a leader regardless of the amount of training they receive. However, real leaders, true leaders, can be trained to hone their leadership skills. Leaders require skills in the areas of:

- Motivational techniques

- Public speaking skills
- Organizational development skills
- Interpersonal relationships
- Union avoidance skills (applicable to both union and non-union environments)
- Written communication skills
- Project management and administrative skills
- Time management skills

Who are those true leaders within an organization? Try to identify them. They are often people others turn to for guidance. Identifying those leaders or potential leaders provides the manager with a valuable asset for the CMMS implementation by putting those people on the project team. The manager should work closely with these people; put them "under your wings", confide more of the tactical plan to them, provide leadership training, enlist their support (and support them), give them a lot of latitude to do their jobs while being there for them if they need your help in any way. These are the core people who will be the champions you need

for the CMMS to be successful long term.

A project team is a must for any successful CMMS implementation. Choosing the right people for the team which will champion the CMMS, help drive the organization, be willing to do some work, and lead various sub-teams is what is necessary for the CMMS project team. However, keep in mind that teams cannot be built through edicts, policies, procedures, or programs. Leaders build teams through their charismatic leadership, trust, delegation of responsibility, assignment of authority, allowing people the flexibility to do their jobs, and providing support when needed. Those organizations that function efficiently, effectively, and, seemingly, effortlessly without much perceptible management oversight are real teams. These are the teams that have been built by leaders and nurtured over a period of years to achieve the level of excellence they display.

Once the project team has been formed, it is the responsibility of the team leader to insure the team members receive all of the necessary skills training they will require to achieve a successful CMMS implementation. Project

management and written and oral communications skills are among the most basic requirements.

MANAGING CHANGE WITHIN THE ORGANIZATION

People, by nature, do not like change. Managers, teams, articles, experts, etc. all announce that change is good for organizations and to provide job enrichment, more control for people of their work, more voice in the direction of the business, etc. In fact, change is good, but individuals do not like change fostered upon them without them feeling they have fostered that change themselves. The easiest way to convince people to accept change is to make it happen slowly, over a period of time, so it is not intrusive to their daily jobs. Spending the time twelve to eighteen months in advance of the actual implementation of a CMMS allows for those eventually affected to assimilate to the change gradually and for management to communicate the change more easily. The most difficult aspect falls to the communicating manager for he or she must have solidified the long term strategy for the organization in their own mind, which includes

a CMMS, prior to beginning the communications. Throughout the entire CMMS implementation periodically refer to the strategy to insure the organization is on the right path to success. Do not lose sight of the long range objectives. Refer frequently (weekly) to the tactical plan to insure it is being followed. Constantly review your progress to baselines; identify and respond to new issues and concerns from both the organization and the business; resolve any problems quickly to keep the project on track and on schedule.

SUMMARY

This paper is directed to those managers who will be the champion and leader of any organization contemplating the purchase and implementation of a computerized maintenance management system. There is a distinction between a CMMS installation and a CMMS implementation. An installation ends once the users go live on the new software. An implementation continues on long after the go-live date. CMMS software is similar to a sophisticated PC-based office software program. Learning the basics gets you functioning with

the minimal features of the software. However, to gain more benefit you must continue to push yourself to try to learn more about the program and, perhaps, even take some additional training courses to expand your knowledge and skills. It is no different with a CMMS. Too many CMMS users become complacent with the level of expertise they have when they go-live, never realizing the full potential of the CMMS software they have before them. As the manager and the leader this is where you must continue to lead the implementation long after the go-live date.

Remember, as the leader:

- You must be cognizant that you are the key to the success of the strategic plan.
- You are a force and a crucial player in the tactical plan.
- You must constantly sense your internal and external organizations for problems or issues and address them immediately.
- You do not delegate responsibility for achieving your objectives, and those tactical objectives you delegate must be monitored.

- Always maintain a constant flow of communications -- Never assume people know all you know about the strategy, the tactics, the performance to baselines, and the status -- COMMUNICATE!

A successful CMMS implementation means making everyone a winner. When that is achieved, the organization wins and the business also wins.

© 1989
R. L. Steibly, CPE & Certified Senior Consultant
Steibly & Associates
Asset Management Consulting
Mobile: 802-779-6252
Email: steiblyrl@comcast.net

Published: "Facilitating Cultural Change in Preparation for Computerization", presentation and paper at the American Institute of Plant Engineers (AIPE) Annual Meeting and Conference, Facilities '94, Cincinnati, Ohio, September 1994.