



BEST PRACTICE Test Leadership

All test managers are part manager and part leader. Most software test managers will spend most of their time managing and only a part of the time leading. However as testing moves into new areas such as testing to determine whether user success criteria have been achieved, the software test manager becomes more of a leader than a manager.

In discussing leadership, we will address these areas:

- Chairing meetings
- Team building
- Quality Management Organizational Structure
- Code of ethics

Chairing Meetings

Many IT staff members spend almost one half of their day in meetings. Meetings can be both productive and non-productive depending on how they are organized, run and meeting decisions implemented. The software project manager in chairing meetings must be more of a leader than a manager.

The following guidelines on conducting meetings are common to most of the books and manuals on how to run an effective meeting. These guidelines are:

- Specific objectives to accomplish at the meeting must be defined.
- Those having a stake in the potential decisions need to be represented at the meeting.
- An agenda for the meeting, plus any background data, must be distributed to the attendees prior to the meeting allowing enough time for the individuals to prepare for the meeting discussions.
- Rules for running the meeting need to be established such as Robert's Rules of Order.
- The individual chairing the meeting must assure that all present have an equal opportunity to express their opinions.
- A consensus process should be used to develop conclusions, actions to be taken, as a result of the meeting.
- Specific responsibilities should be assigned to complete the actions.
- Minutes of the meeting should be disseminated to the attendees within a reasonable period of time after the meeting concludes.



Team Building

Much has been written about organization loyalty to employees and employee loyalty to organizations. R.M. Kanter stated that, “New loyalty is not to the boss or to the company, but to projects that actualize the mission and offer challenge, growth, and credit for results.” What this tells the project leader is that team building needs to focus on the challenge, growth and credit an individual can achieve from working on a specific project.

This loyalty concept helps differentiate the challenge of the software project manager versus the traditional project manager. In projects where large portions of the project team are implementers rather than professionals, loyalty may be more to the supervisor or company. Implementers have different motivations and loyalties than do many IT professionals.

There are a myriad of books on team building. The objective of this discussion is not to duplicate what is available, but to focus on components of team building that are directed more at software teams, than traditional implementation teams. These components are: team development, team member interaction, team ethics, and team rewards.

Team Development

There are seven guidelines that are helpful in developing compatibility and motivation of a software project team:

1. Communicate the vision, objectives, and goals of the project.

A software professional wants to know what the project is trying to accomplish. The vision indicates why the project is undertaken, the goals and objectives indicate what the project is to achieve. For example, the vision of a bank commercial loan software project might be to increase profitability. This specific objective might be to provide the loan officer the information needed to make a good loan decision.

2. Define roles and responsibilities of team members.

Software projects, unlike non-software projects, have roles which are heavily people dependent and project scope dependent. It's important for professional staff to have those roles and responsibilities clearly defined. The staffing matrix described in an earlier part of this category would define those roles and responsibilities.



3. Empower team members to manage their responsibilities.

Empowerment is a major motivator for professional people. Many of the agile concepts relate to empowerment. In other words, enable people to perform the tasks in the most efficient and effective manner. This helps eliminate barriers that increase costs and help project schedule.

4. Hold team members accountable for their assigned responsibilities in the team process.

Team members need to have their work tasks well defined and then held accountable for completing those work tasks. Managerial practices indicate that this process works best when individuals accept responsibility for performing tasks. Thus, having the Project Manager work individually with team members to assign team tasks they agree to perform, and then hold those individuals accountable for completing those tasks is an effective managerial practice.

5. Ensure that all the required skills are present on the team.

Projects cannot be completed successfully if the team members lack the skills to complete the project. It is not necessary for every team member to have all the needed skills, but the team in total needs the skills. The staffing matrix helps assure that the appropriate skills exist within the project team.

6. Provide the necessary technical and team training.

If the team lacks technical and team skills, the project manager should provide that training. Technical skills include the skills necessary to design and build the software, team skills to cover such skills as consensus building and conflict resolution.

7. Award successes and celebrate achievements.

Establishing goals and objectives provides the basis for rewards and celebrations. While it's appropriate to reward and celebrate individual achievements, the team building necessitates team goals and team celebrations. These can be centered around milestones accomplished, as well as scoring high on customer satisfaction surveys.



Team Member Interaction

The following guidelines have proven effective in building an effective and cohesive team:

1. Know communication and work preference styles of staff and assure that the team complements those communication and work preference styles.
2. Set clear, measurable work requirement standards.
3. Delegate authority to staff members that empowers them to perform the tasks in the manner they deem most effective and efficient.
4. Exact responsibility and accountability for team members for completing their work tasks in an effective efficient manner with high quality work products.
5. Give immediate and objective feedback to team members on the performance of their individual and team tasks.
6. Communicate, communicate, and communicate with all team members about any event that may impact team performance.

Team Ethics

The accounting and other corporate scandals during the past few years have undermined the public's confidence in corporations to act in an ethical manner, and to report truthful accounting data. These scandals resulted in the passage of the Sarbanes-Oxley Act which made unethical and improper accounting a criminal act and subjected the corporate management to jail sentences. Corporate ethics at all levels of an organization are important.

The following six attributes of the team are associated with ethical team behavior:

- Customer relations that are truthful and fair to all parties

Ethical customer relations means treating customer/user personnel with integrity; not promising unachievable results; and informing customer/users of problems that could have a negative impact on delivery or software performance; and striving to fully understand the user's true processing needs.



- Protecting company property

The team should not undertake any action that would have a negative impact on the protection of company property or subject that property to loss.

- Compliance with company policies

The team should be knowledgeable in company policies, considerate of those policies when making team decisions and taking only those actions that meet both the letter and intent of company policies.

- Integrity of information

Team should strive to ensure that information they produce is reliable and valid, and that the information is conveyed to the appropriate stakeholders on a timely basis.

- Attendance

Except for valid reasons, the team should be in attendance during normal work hours, be prompt for meetings, and during work hours devote their effort to performing work tasks.

- Redefine standards of quality

The team should be knowledgeable in the quality standards for team deliverables, work in a manner that is conducive to meeting those quality standards, and if they cannot be met, inform the appropriate stakeholders of the lack of quality of team deliverables.

Team Rewards

Over the years, organizations have focused their reward system on individual performance. However, focusing only on individual rewards may undermine team cooperation and performance. If teams are the means by which work is performed, and software project development teams are the means for building software, then team rewards need to be incorporated into the organization's reward system.

There is no generally accepted approach for rewarding teams. The following reward systems have proven effective in organizations.



- Team celebrations

At the conclusion of meeting team milestones and objectives, the team celebrates as a group at events such as luncheons, sporting activities, and other off-site events.

- Team financial rewards

Teams are given a cash reward for meeting an objective or milestone and then the team splits the rewards amongst themselves in any manner in which the team determines appropriate.

- Team recognition

Management recognizes the work of the team and recognizes that performance in such rewards as special parking spaces, lunch with the boss, time off with pay, and announcements in a variety of forms to the team's peers of the team's accomplishments.

Quality Management Organizational Structure

Until approximately 25 years ago almost all organizational structures were hierarchical. Direction came from the top down. The quality revolution significantly impacted the typical hierarchical structure. The structure was flattened, employees were empowered to make more decisions and new approaches to management were introduced.

The ability to become a leader is partially dependent upon whether the organization is a traditional hierarchical management approach, or the new quality management philosophy. The new quality management philosophy encourages leadership; the traditional hierarchical approach to management encourages managers.

Most managers practice traditional management. They have been taught to control their organization and employees, using an "I'll tell you what to do, and you'll do it" mentality. Many managers look at the short-term because their commitment to the organization is short range.

The key differences in philosophy between traditional management and quality management environments are illustrated in Table 15.

Table 15. Traditional versus Quality Management Philosophy

Traditional Management Philosophy	Quality Management Philosophy
Controls each result	Use the process
Who made the error?	What allowed the error?
Correct the error	Reduce variation and prevent the error
Employees are the problem	Refine the process
Management accountable to their manager	Management accountable to the customer
Competition between organizations	Teamwork
Motivation from fear of failure	Motivation from within (self)
Management of outputs (results)—focusing on detection of defects	Management of process inputs—methods or sources of variation that focus on preventing defects
Fire fighting	Continuous process improvement
Accomplishment from meeting quotas, the monthly or quarterly bottom line	Accomplishment from long-term impact of improving processes

The culture change required to build a quality management environment is significant. Management must change its philosophy, practices, and assumptions about work and people. The biggest mistake usually made when implementing a quality management environment is underestimating the cultural changes that must occur and the time required for accomplishing these changes. It is usually felt that only a few control charts are needed, and little effort is made to change the culture of the organization.

The programs needed to change from a traditional to quality management culture must be customized for an organization and its current culture. Table 16 illustrates cultural changes that can be made.

Table 16. Organizational Changes From Traditional Culture to a Quality Management Culture

Category	Traditional Culture	Quality Management Culture
Mission	Maximum return on investment (ROI), management by objectives (MBO)	Ethical behavior and customer satisfaction, climate for continuous improvement, ROI as a measure of performance
Customer Requirements	Incomplete or ambiguous understanding of customer requirements	Uses a systematic approach to seek out, understand and satisfy both internal and external customer requirements
Suppliers	Undirected relationship	Partnership
Objectives	Orientation to short-term objectives and actions with limited long-term perspective	Deliberate balance of long-term goals with successive short-term objectives
Improvement	Acceptance of process variability and subsequent corrective action as the norm	Understanding and continually improving the process
Problem Solving	Unstructured individualistic problem-solving and decision-making	Predominantly participative and interdisciplinary problem-solving and decision-making based on substantive data
Jobs and People	Functional, narrow scope, management controlled	Management and employee involvement, work teams, integrated functions
Management Style	Management style with uncertain objectives that instills fear of failure	Open style with clear and consistent objectives, encouraging group-derived continuous improvement
Role of Manager	Plan, organize, assign, control and enforce	Communicate, consult, delegate, coach, mentor, remove barriers, and establish trust
Rewards & Recognition	Pay by job, few team incentives	Individual and group recognition and rewards, negotiated criteria
Measurement	Orientation toward data gathering for problem identification	Data used to understand and continuously improve processes

References

Guide – CSTE Common Body Of Knowledge, V6.1