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# Facilitation Skills Remain a Critical Ingredient Of World-Class Performance

By Richard E. Mallory

Quiet and often unseen, facilitation continues to be a critical human resource skill set for modern organizations that seek to be world-class product and service providers. In fact, interviews with leaders of the 2006 U.S. Baldrige Award winners reveal that all of them are heavily dependent either on designated facilitators or on managers who practice facilitation skills. Such facilitators provide critical support in problem-solving methodology, in team management, and in conflict resolution.

Pat Lapekas, Vice President of Process Management at 2006 Baldrige Award winner Premier, Inc., said that facilitators are considered essential in most instances because it is "too hard [for team leaders] to change their own process and follow the standard problem-solving methodology." She noted that facilitators support most problem-solving teams at Premier, and that chosen facilitators are often not a part of the same business unit or process function in which the problem exists. "That has helped to add some objectivity to the process," she said (*P. Lapekas, personal communications, Dec. 20, 2006, and Feb. 19, 2007*).

Facilitators have been a staple of continuous quality improvement since the beginning of the team-based improvement effort in the 1980s. They are considered to be neutral third parties, who focus on the quality of the problem-solving process, rather than on the content of

the team deliberations.<sup>1</sup> Facilitators are often seen as guides for the problem-solving process, who can assist with the technical skills of group interactions and problem solving.

### Traditional Roles Of Facilitators

Quality literature speaks of facilitators as one of the fundamental roles that must be addressed by teams. Traditional functions of facilitators include:

- Keeping the team focused
- Ensuring that meeting time is well used
- Keeping all team members working together as a group
- Ensuring that all team members participate
- Helping the team use appropriate decision-making techniques<sup>2</sup>

As a result, many organizations rely on their facilitators to be leaders in the problem-solving structure they have adopted.

Many organizations also view facilitators as resource personnel to coach teams, to manage meetings, and to provide other critical support. These personnel ensure that their teams deliver the benefits for which they were commissioned.<sup>3</sup>

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# Chair's Message

By Heather McCain

## Networking in 2008

For my son, “networking” means logging onto popular social sites such as MySpace and Facebook. As more and more of my son’s generation enter the workforce, they are looking for similar social networking at a professional level. Business professionals are creating on-line forums, message boards, and networking websites such as LinkedIn to share knowledge and job information. Many companies are also creating intranet networking sites for employees to share information.

Although I enjoy the flexibility and convenience of on-line networking, I still like meeting others in person. Face-to-face networking, for those of us who are extroverted, provides more than knowledge and information. It adds the personal touch that I just don’t get from rubbing virtual elbows with colleagues. I like reading body language. I like to ask questions and get an immediate personal response. I like being around others with similar interests.

The Quality Management Division is offering a networking opportunity before the conference in Orlando. A welcome reception will be held in the exhibit area on Wednesday, February 20, 2008. The QMD leadership team will be there to meet and greet conference attendees. The conference also provides impromptu networking. People often get together in the exhibit area with organization representatives exhibiting their products and services or with other conference attendees also looking to improve their organizations.

Conferences are great opportunities to learn from others about customer service, exceptional product quality, project management, and overall operational effectiveness. The 20th Quality Management Conference will provide proven approaches, valuable tools, and successful strategies for “Attaining Excellence.” We have increased

the number of concurrent sessions focused on traditional quality concepts, case studies, and the challenging migration of quality “best practices” to the complex healthcare and service industries. We have four great keynote speakers:

- Retired Marine Corps Lieutenant General Jefferson Davis Howell, Jr.
- President and founder of The IPL Group, LLC, Michael Dreikorn
- Retired President of Aerospace Support for Boeing Integrated Defense Systems, Dr. David Spong
- President and CEO of Medical City in Dallas, TX, Britt Berrett

Please visit our website at [www.asq.org/qm/conferences](http://www.asq.org/qm/conferences) for information about registering for the conference. I hope to see you in Florida in February!

Heather McCain  
Chair, Quality Management Division

WINTER 2008

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**Collaboration Does Not Happen Naturally**

“Collaboration among diverse professionals does not happen automatically when people come together, even when people sincerely desire to cooperate,” according to Fran Rees, author of *The Facilitator Excellence Handbook*.<sup>4</sup> Problems that arise include:

- Lack of buy-in to group goals
- Personal agendas that adversely affect member behavior
- Decisions and actions that are not recorded and are therefore later abridged
- Poor attendance by one or more members

These problems force facilitators to focus on three dimensions of team building: tackling the assigned problem, maintaining an effective group dynamic, and winning the personal buy-in of each individual (Figure 1).

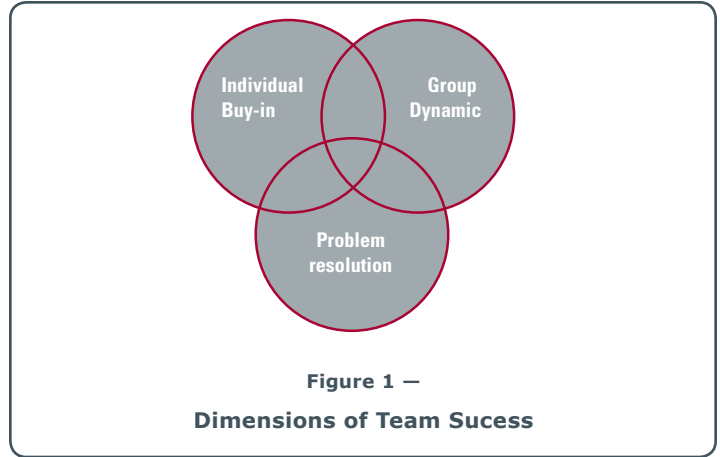
Even actions as simple as ensuring that a group record is created can be very helpful to a team that is struggling to demonstrate progress. It does not matter whether that record is in the form of meeting minutes or easel pages, as long as it captures fairly all deliberations and the decisions reached.

Rees presents the viewpoint that the facilitators must often be good at simple communication techniques. This includes “asking questions, listening, paraphrasing, clarifying, and summarizing” during group meetings. “The facilitator ensures that group members use the most effective methods to accomplish tasks efficiently and beneficially, with adequate time to consider ideas and alternatives. The facilitator provides method and structure so a group can focus its energy and creativity on a particular task, topic, or project.”<sup>5</sup>

**Focused Training In Support Of Facilitators**

Given such high expectations of facilitators, Baldrige organizations often provide focused training before they undertake their roles. Lapekas said facilitators at Premier receive “massive training” in the 5-step PDCA methodology that guides all their teams. “Facilitators are assumed to have mastered problem-solving methodology,” she said. “They are responsible for ensuring that our formal teams are tracking according to the process we’ve established for them.” However, they do not have one standard training curriculum (*P. Lapekas, personal communications, Dec. 20, 2006, and Feb. 19, 2007*).

Lapekas said that some facilitators have project management skills, and many are Project Management Professionals. A number are Lean Six Sigma trained and certified through ASQ. In addition, “some of them are trained in team facilitation and leadership skills.” She noted that in the coming year more are going to be trained in “soft skills development, including change management, dealing



with barriers, and redirecting dysfunctional teams” (*P. Lapekas, personal communications, Dec. 20, 2006, and Feb. 19, 2007*).

Christina Thompson, Senior Director of Healthcare Informatics at Premier, is one of the most experienced facilitators in that organization, and she said that managing human dynamics in teams is one of the most challenging roles. This includes “breaking up assignments and making sure people aren’t getting overloaded.” She emphasized that it is also important to make sure assigned team members either participate or are replaced (*C. Thompson, personal communication, Feb. 22, 2007*).

**Team Dysfunction Trumps Any Quality Tool**

Thompson said that it is not enough just to know Six Sigma: “If you have a dysfunctional team, you can’t let it continue on.” She said that team leaders must address interpersonal issues as well as the assigned problem. “If you can’t facilitate the work being done, it doesn’t matter what you know” (*C. Thompson, personal communication, Feb. 22, 2007*).

Joellen Murphree, Director of Clinical Quality for the North Mississippi Medical Center (NMMC), represents another of the 2006 Baldrige Award winning organizations. She said that roughly 80% of all its teams use a trained facilitator, and that most of the rest have personnel trained in facilitation skills assigned as a team member or a team leader (*J. Murphree, personal communications, Dec. 19, 2006, and March 2, 2007*).

NMMC uses a series of five questions for differentiating management issues from problems assigned to problem-solving teams, according to Murphree. They are:

- Can you fix it tomorrow without a team?  
If yes, it is not a PI team problem.
- Do you have evidence of a need?  
If no, it is not a PI team problem.

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**(FACILITATION SKILLS REMAIN A CRITICAL INGREDIENT,**  
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- Do you have measures of the quality attribute needing improvement? If no, it is not a PI team problem.
- Does it align with a critical success factor and a 90-day action plan? If no, it is not a PI team problem.
- Is this ongoing monitoring of a process that is within expected control limits? If yes, it is not a PI team problem.

Murphree said all teams must be approved by a Service Line Administrator or Vice President within the hospital, and they are then formally tracked through routine reporting of results. “All teams are required to have measures.... They must keep minutes, and provide quarterly reporting of progress and outcomes. These reports are posted on the PI teams registry web site” (*J. Murphree, personal communications, Dec. 19, 2006, and March 2, 2007*).

### **Facilitators Ensure Fulfillment Of Team Requirements**

In this environment facilitators become important support personnel to ensure that internal team requirements are fulfilled. Murphree said that facilitators are trained internally in PDCA and in team facilitation skills. There are also six Black Belts for teams requiring that level of sophistication. “Facilitators are considered to be process improvement coaches and resource people to their assigned teams” (*J. Murphree, personal communications, Dec. 19, 2006, and March 2, 2007*).

Terry May, President of MESA Products, Inc., leads a small manufacturing organization with about 70 employees that was also a 2006 Baldrige Winner. His continuous improvement effort charters some formal teams, “but the majority are much more informal,” due to the company’s smaller size (*T. May, personal communications, Jan. 5, 2007*).

May said that Baldrige is MESA’s overall management model, “and leads the company to a philosophy of performance improvement in all areas. LEAN is the improvement methodology most often used for specific improvement efforts.... LEAN events use basic LEAN tools, while internal projects follow the Define-Measure-Assess-Improve and Control model of Six Sigma.” All MESA teams publish results and reports back to the executive level (*T. May, personal communications, Jan. 5, 2007*).

May used an external facilitator for all his initial lean project teams, but is in the process of shifting this responsibility to his plant manager. He acknowledged that there is a human and technological side to change, and that a facilitator can assist with both.

May said that MESA counts on its managers and supervisors to facilitate internal events, and he relies on an “open, informal culture” in this small organization to ensure full participation and inclusion of all ideas. He noted that “openness and participation are part of the culture,” and expected of all supervisors (*T. May, personal communications, Jan. 5, 2007*).

May said he tries to model appropriate behavior himself, and he facilitates all new-employee meetings. May also stresses Baldrige values in employee meetings. “Facilitator is a foreign term. It is just a part of the role that person plays. It is just one skill set we expect them to have” (*T. May, personal communications, Jan. 5, 2007*).

All these 2006 Baldrige Award winners agree that facilitators and facilitation skills have been foundational for the continuous improvement and change management that was essential their world class performance. Facilitation appears to be the quiet and unseen skill set that great organizations cannot afford to overlook.

### **Footnotes**

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5. Rees, P. 23.

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# Project Oriented Cost of Quality

By Douglas C. Wood

For many years, the mass production model was the primary business model. As our pace of life accelerates and more organizations use a project business model, the tools of improvement that apply to a mass production model need to be refitted for a project business environment. Quality cost is one highly useful improvement tool that is difficult to use effectively in a project environment. However, there are ways to adapt cost of quality for better application to the project environment.

By looking at collected quality cost data from a series of projects and systematically analyzing the data for common trends and relationships, one or more models of quality cost can be developed. These models may help understand how quality costs occur over the life of both “good” and “bad” projects, allowing managers to evaluate the approach to a given project. This can aid management during the course of a project, rather than after it has been completed.

Today, many firms use quality costs, even if they have modified the approach to meet their needs. The usual form is the PAF model, named by the initials of the three primary components: Prevention, Appraisal, and Failure costs. Quality costs sorted into these three categories allow for a cause-and-effect examination of quality management efforts. Many firms use this approach to gain a better grasp of return on investment in quality processes. Even if some firms choose to measure only the failure portion of quality costs, and do not tie their failure costs to specific prevention costs, the concept is valid. It allows a dollars-and-cents measure of quality management, a critical means of communication with top leaders. Modern advances in quality theory have not changed these fundamentals; Six Sigma relies on quality costs for its primary strategic metric—return on investment.

## The Project Environment

While quality costs have been applied in a wide variety of industries, it is in the context of mass production that the greatest application has been found. Mass production enterprises lend themselves to gradual improvement, as a slow but steady alteration of processes can be seen through incremental changes in business results. The PAF model works well in mass production organizations such as electrical component manufacturing, automobile assembly, and pharmaceuticals.

For example, an automobile parts manufacturer measures their cost of quality over time and finds that a 5% reduction year-over-year has occurred. Prevention has been held constant, but appraisal costs have been reduced as prevention activities place processes in better control. Improved control reduces the need for depth and frequency of inspection, and inspectors can be reassigned to other tasks. Failure costs can be reduced as returns from customers shrink and rework is minimized. Defects not created do not need rework. Scrap has also shrunk accordingly. It is common for a firm to reduce their total cost of quality by 30% to 75% in four years, simply by applying the idea that an ounce of prevention is worth a pound of cure. Indeed, most firms find that each additional dollar of prevention reduces failure costs by \$6 to \$10 within two years. Not a bad investment!

Looking beyond mass production organizations, let's consider what happens with quality cost in project-based industries. Rather than having a steady flow of similar products, each contributing pennies to the bottom line, these firms face a progression of expensive but potentially profitable projects. Each project has a different time frame, different environment, and different customer demands. This kind of work possesses several

characteristics that make quality costs difficult to analyze.

## Scope

First, each project has a unique scope. While many projects may be similar, a project manager finds that each successive project demands careful understanding of resource needs and timing during planning and execution. From project to project, the scope will change, and a good manager adapts approaches for each. Holding the scope to what is needed by each customer is a key to completing profitable projects on time.

For two projects with similar activities but different scope, the quality cost can differ significantly. If the scope of a project takes the team into tasks that are not familiar, the prevention costs (e.g., training) may rise. The failure costs for a project of larger scope may rise faster, simply due to effects of scale. Communication needs of larger projects introduce still more variability.

## Environment

Second, each project takes place in a different environment. Outside forces are likely to vary significantly in each new project, making comparisons of one project to another more difficult. Different requirements will place unique demands in each project, so the quality cost measures in each project can be qualitatively and quantitatively different. While projects are still likely to fall into groups (in the context of quality costs) these groups may not be identifiable using the usual parameters.

For example, look at two projects for design and construction of electrical substations. Both may be for the same capacity, and even for the same client power distribution

(PROJECT ORIENTED COST OF QUALITY,  
continued from page 5)

firm. One may be situated in a flood plain or in a valley, and the other on top of a hill. The opportunity for a flood and the soil conditions for the valley substation set up one set of test requirements. The hilltop location will have its own needs, such as subsurface stability. These two environments are likely to affect the quality costs for the overall project. There may be other situational demands that are not as obvious, due to regulation and other forces.

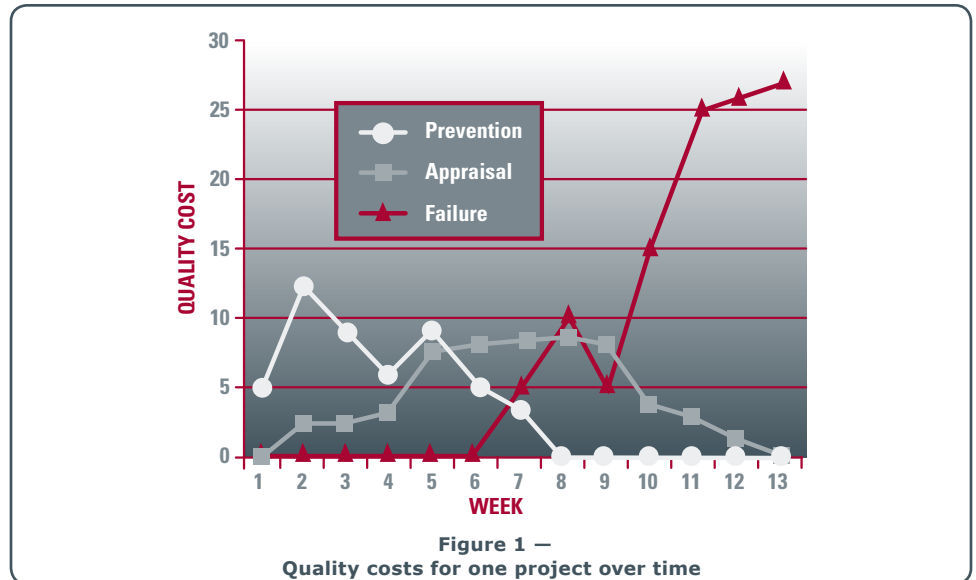
### Priority Migration

Third, priorities will migrate over the life of the project. At the start, prevention activities will be of maximum importance. Appraisal activities are more likely to occur in the middle and at the end of a project. Failure costs will gather at the end of a project. This changing complexion of quality costs over time prevents a steady-state analysis of quality costs, an approach that is normal in mass production environments. At different points during a project, the ideal quality cost proportions of prevention to appraisal to failure will be different.

If a firm is sufficiently large, the total prevention, total appraisal and total failure costs can be tracked over a long period of time, and then comparisons can be made to see if the right prevention activities are occurring. While this may work for a large firm, smaller firms will find this difficult. Also, such a global view of quality costs will not help in evaluation of day-to-day activities and decisions made by individual project managers. Remember, in any environment, it is individual managers who provide the muscle of the quality control system. An approach that does not support good decisions by individual managers is a distraction, not a contribution to higher profits.

### Failure Toleration

Fourth, a mass production system will tolerate a degree of failure. Every mass produced item has a tolerable level of poor quality. While that level varies for each product, it can be relatively high. For a project-based business, every project needs



to meet its goals. A single failed project can devastate a project-based business, no matter how large the enterprise. In some cases, a larger enterprise can suffer more from a failed project due to the higher degree of visibility. To control quality, project managers need to see how their cost of quality stands during the various phases of their project, and how their quality activities are likely to affect the project outcome. In other words, are prevention and appraisal costs in line during the project?

For example, in a project that is using inexperienced staff, added training is desirable. (Higher prevention costs.) If projects in certain locations have higher risks of subsurface soil shifts, added testing is needed. (Higher appraisal costs.) If high failure costs due to redesign and added construction expenses are to be avoided, the project manager needs to know about the issues early, and the project plan needs to reflect these added activities and costs.

### A New Model of Quality Costs for Project-Based Environments

The four characteristics of project-based activities discussed above operate together in a synergistic fashion to place quality costs in a different light for project-based businesses. Mass production businesses use the common PAF model of quality costs successfully. Project-based businesses face different demands. This suggests a new

model may be needed, something that aligns better with application of quality costs to project work.

Imagine a time chart of quality costs for a project. The chart begins at week 1, with some value for prevention costs. As time passes, the prevention costs peak and then decline. Appraisal costs begin as the project moves forward, again reaching a peak and dropping toward the end of the project. Failure costs begin to accumulate as the project reaches the end, perhaps reaching a peak just as the project winds down. Such a chart might look like Figure 1.

While each project would have a slightly different chart, there are likely to be similarities. Of course, a standard model would have to be adjusted for project length and cost, to eliminate simple differences. The more complex differences that remain will be due to fundamental characteristics of the project and the project environment. Many projects' data could be combined, creating a composite chart. Individual (common cause) variations could be averaged, smoothing the plot curves.

With a number of projects' data to work with, and other data about the project such as staff training and experience, projects can be placed in groups. The groups would be defined first by quality cost data curves, placing together seemingly "different" projects that show the same quality cost curves.

For example, engineering projects dealing with rack-supported warehouses may face high failure costs if the staff does not have experience with wind loading and soil compaction. This would indicate a higher prevention cost for the training that would be needed. If other kinds of projects show the same quality cost curves, all may be grouped together for quality cost planning, even if the final outcome is for different end products.

Data such as prevention, appraisal and failure costs and staff training levels are not difficult to obtain. The analysis is challenging, but not impossible. Data that appear suspect due to variability may be confirmed after the prevention, appraisal and failure costs are evaluated in light of these project groups. The analysis is likely to progress in stages; relationships are discovered and then project aspects are better understood, followed by further analysis.

Comparison of differences between projects can identify the best level for prevention and appraisal, relative to controlling failure costs. These data would be used by project managers to achieve better outcomes on future projects.

### Conclusion

In the end, it is likely that multiple standard quality cost models could be built for project groups. The different standard models would help guide projects, providing a project manager with guidance for the best levels of appraisal and prevention activities. Additionally, the problem of how to measure quality costs in the middle of a project can be solved in real time by creating quality cost models to fit economically similar project groups. This allows a project manager to take action to prevent failure costs without waiting until a project is complete.

Prevention of failure costs is the primary objective of quality cost measurement. The

approach outlined in this article provides an innovative solution to achieving this objective in project-oriented businesses.

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# Role of Management Processes in ISO 9001-Based Quality Management Systems

By Mustafa S. Shraim, PhD

## Introduction

Having a quality management system (QMS) in place does not necessarily mean providing defect-free products and/or services. However, an efficient and sustainable QMS through leadership and participative management is more likely to address and permanently solve quality problems. For a QMS to be efficient and sustainable, some processes—particularly those concerning top management—need to be underscored.

Unlike previous revisions, the ISO 9001:2000 is much closer to the total quality management (TQM) infrastructure, particularly when it comes to customer satisfaction, management commitment, and continuous improvement. In addition, utilizing the process approach—which means managing the system in terms of interrelated processes—is a critical factor when it comes to implementa-

tion. As described under clause 0.2 of ISO 9001:2000, the standard “promotes the adoption of a process approach when developing, implementing and improving the effectiveness and efficiency of the quality management system (QMS) to enhance interested party satisfaction by meeting interested party requirements.” Additionally, clause 4.1 requires that the organization must both identify processes needed for effective operations and determine the sequence and interactions among such processes.

To gain a competitive advantage in an increasingly global marketplace, organizations must produce quality goods and services better and faster with fewer resources. According to Feigenbaum (1999), using fact-based monitoring systems within a more structured approach is critical in quality development and in the reduction of

total quality costs. The structured approach can be viewed as an integrated system of interlinked processes, which—if implemented appropriately—should be sustainable.

Many quality experts have recognized leadership as a key factor in the success of quality initiatives (Deming 1986; Juran 1989). Research has shown that leadership and customer focus were strong predictors of organizational performance. Other empirical research has indicated that effective management practices within the first six categories of the Baldrige Award criteria have a positive impact on performance and market competitiveness (DeBaylo, 1999). In addition, almost all national and international quality awards and certification criteria start with the management/leadership category.

(ROLE OF MANAGEMENT PROCESSES, continued from page 7)

**A System of Interlinked Processes**

The QMS model in Figure 1 shows how processes are sequenced and interlinked (Shraim, 2004). The model starts with all possible inputs from interested parties, particularly customers. Suppliers can also be viewed as customers in the sense that they require timely release of order requirements, forecasts, and other related needs. All forms of input requirements are identified first, followed by the appropriate processes to address such requirements. For each process identified, resource needs—both human and physical—must be fulfilled adequately.

The model decomposes the ISO 9001:2000 clauses of product realization, management responsibility, resource management, and measurement, analysis and

improvement, into lower-level processes. For example, product realization is broken down into feasibility review, planning, purchasing, supplier evaluation, and so on. The model shows interfaces and interactions among processes.

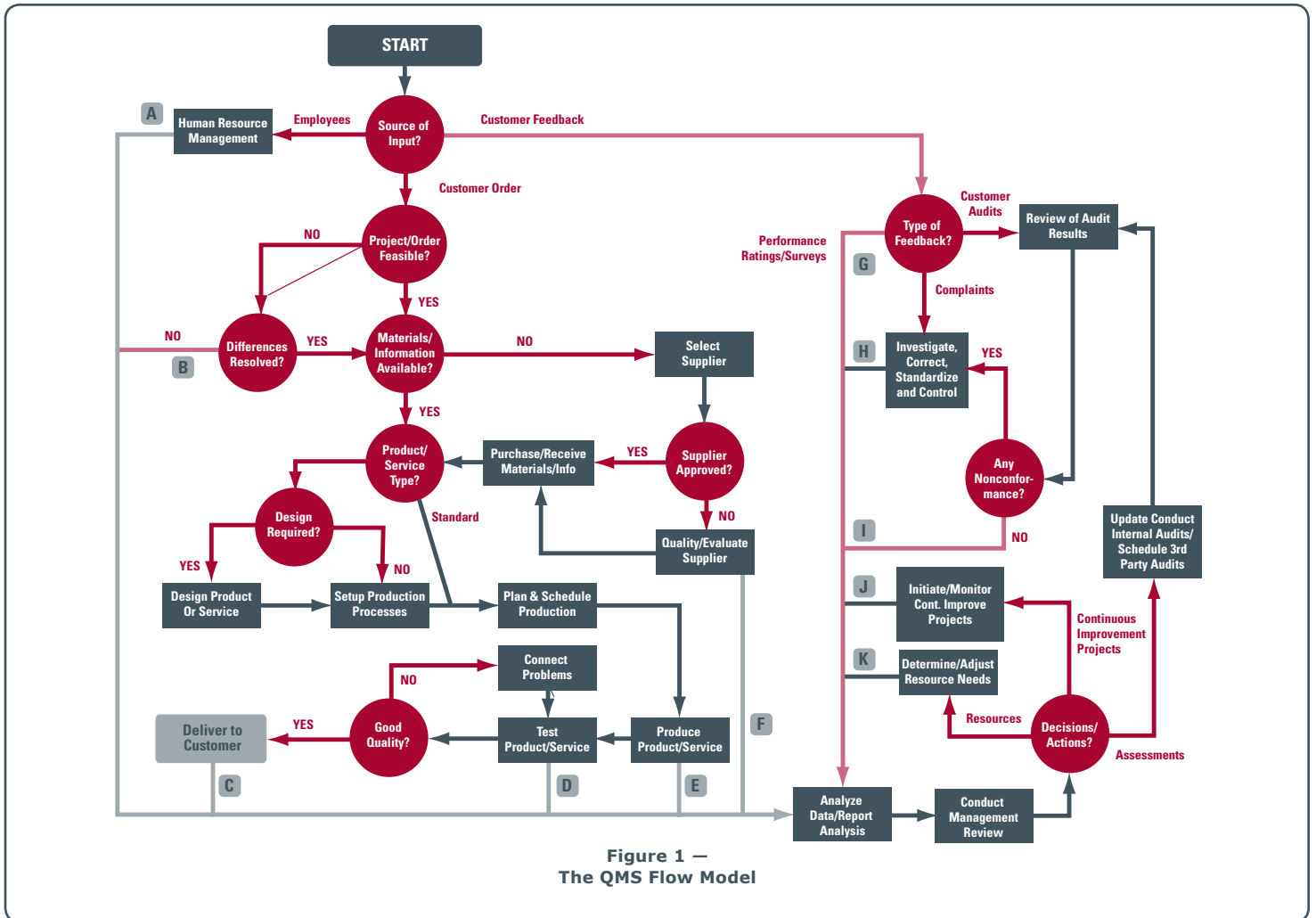
The performance information from many processes is filtered through data analysis conducted at different levels. The management review process itself can be broken down into a hierarchy of reviews, depending on the frequency of the data analysis. For example, analysis of quality data on products or services can be reviewed and acted upon more frequently than the analysis on infeasible projects.

This model has been used by the author, with some adjustments, as a tool or a roadmap to effectively implement the ISO 9001:2000 requirements in both manufacturing and service organizations.

**Management Processes**

One of the roles of top management is to set the vision and guiding principles for their organization or division. A vision must be inspiring and motivating. It must also be realistic and achievable. Shin, Kalinowski, and El-Einin (1998) observed that while quality management principles appear to be obvious, many organizations have experienced difficulties in implementation. Such difficulties were generally attributed to the implementation process, which was described as cumbersome, lacking focus and time consuming.

In addition to motivating, inspiring, and energizing employees, top management must review business performance and take appropriate action. However, before doing so, data from different processes at different levels must be collected and analyzed.



Although data analysis is depicted as only one process activity in the QMS model, this is not to suggest that data analysis be performed by one unit or as one process in the organization. Data is collected at different levels throughout the organization and, therefore, should be analyzed accordingly. The role of management is to identify points of data collection, responsibility, frequency, and output of such analysis. Table 1 displays the data generated from different processes (identified with uppercase letters in Figure 2) and possible output.

The *Possible Output* column in Table 1 includes examples of data analysis that would be used in the management review process. In the QMS Flow Model in Figure 1, the information generated by process activities is analyzed and then used as input in the management review process, as depicted in Figure 2.

In Table 1, ten types of information are shown as input for management review. The output can be decisions and actions regarding:

- Providing human and/or physical resources: This is related to acquiring new skills, providing additional training, or procuring new equipment.
- Continuous improvement initiatives: This includes initiatives for reduced process variation and waste.
- Process monitoring through internal audit adjustments and improvement initiatives of the QMS.

**Table 1 —  
Process Activities and Possible Output**

ID	Input Description	Possible Output
A	Review of employee feedback	Analysis of suggestions submitted by employees for continuous improvement projects
B	Infeasible projects/orders	Pareto analysis of why projects could not be accepted
C	Delivery to customer	Analysis of delivery times (on-time vs. late deliveries)
D	Product/service testing	Analysis of quality data —e.g. capability analysis, rework
E	Production of product/service	Analysis of throughput, downtime, lead time analysis
F	Supplier evaluation	Ratings of suppliers based on quality, delivery, price.
G	Performance ratings/surveys	Analysis of customer satisfaction indicators based on ratings / surveys
H	Nonconformance control and corrective/preventive action	Analysis of nonconformance from audits as well as customer complaints —e.g. Pareto analysis
I	Review of audits results	Analysis of results from internal and external audits and visits
J	Initiation and monitoring of continuous improvement projects	Analysis of timely progress and results—e.g. savings, employee satisfaction
K	Resource provisions	Breakdown of needed resources—e.g. training, employees, software, equipment, facilities

From the number of inputs/outputs related to management review, it is clear that the management review process is critical in effective QMS implementation. Failure to analyze inputs to be used for taking timely action may result in problems related to:

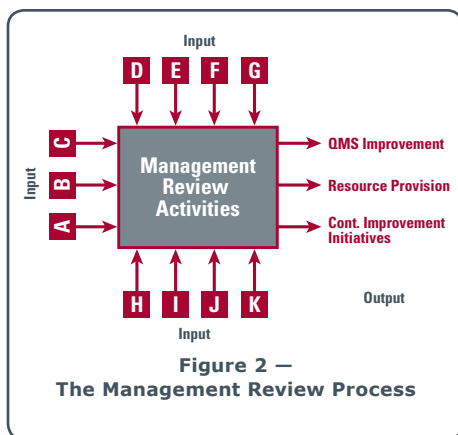
- Customer dissatisfaction
- Employee dissatisfaction
- Supplier quality problems
- Timely resources provision issues related to employee skills, software, and equipment

is a key process and must therefore be taken seriously in order to realize the established vision and goals.

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**Discussion and Concluding Remarks**

The importance of the management review process in implementing and sustaining the QMS cannot be underestimated. Research has shown that effective leadership has a significant impact on other elements of total quality management. Data from different processes, both product realization and product support, must first be analyzed and presented in a suitable format so that effective management reviews can be conducted.

The importance of any QMS process can be measured by the number of its inputs and outputs. Clearly, management review

# Alignment of the QMD Technical Committees

By Steve Babb

I want to begin this article by thanking Bill Denney, past Vice Chair of Technical Committees, and the members of the committees. Over the years, the nine technical committees developed a series of articles for *The Quality Management Forum* and also lined up speakers and created courses for our conferences. Under Bill's leadership this year, the committees produced four Executive Guides for the ASQ Quality Management Division's book series on the Economics of Quality (Table 1). Intended for CEOs as well as for practitioners needing concise perspective on key topics and their financial impact, the initial releases are already nearing a second printing.

## Current and Future Role of the Technical Committees

The technical committees have a vital role within the QMD. Their mission is to develop high-value content to engage people, organizations, and communities in life-long learning and continuous growth in capability. As the new Vice Chair of Technical Committees, I am struck by the similarity between the committees' work and typical Research and Development (R&D) in organizations. R&D starts with identifying the needs of the market and ends with creating valuable new products and services for customers. You, as a member of the QMD, are the customer we wish to serve well.

My first priority, therefore, has been to evaluate the current direction of the technical committees against the future needs and expectations of our members. It is time to set a new course to build on the past successes of the technical committees and to realign the committee resources for opportunities to serve over the next two years. I sincerely hope that as you read this article you may see an opportunity to contribute your own special talents and will wish to volunteer.

**Table 1 —  
Executive Guides Published in by QMD**

*The Executive Guide to Understanding and Implementing Lean Six Sigma: The Financial Impact.* Robert M. Meisel, Steven J. Babb, Steven F. Marsh, and James P. Schlichting, 2007.

*The Executive Guide to Understanding and Implementing the Baldrige Criteria: Improve Revenue and Create Organizational Excellence.* Denis Leonard and Mac McGuire, 2007.

*The Executive Guide to Understanding and Implementing Quality Cost Programs: Reduce Operating Expenses and Increase Revenue.* Douglas C. Wood, 2007.

*The Executive Guide to Understanding and Implementing Employee Engagement Programs: Expand Production Capacity, Increase Revenue, and Save Jobs.* Pat Townsend and Joan Gebhardt, 2007.

Prior to this year, QMD also published *The Executive Guide to Improvement and Change.* G. Dennis Beecroft, Grace L. Duffy, and John W. Moran, 2003.

According to our mission statement, the technical committees are to provide “high-value content” to the QMD. High-value content means compelling articles, books, conference publications, courses, web-based media, and other products that:

- Educate quality professionals in developing quality management technology, methodologies, and tools
- Provide *leaders* with necessary perspective to support “quality” in light of the Economic Case for Quality
- Aintain relevant content for the CQM/OE certification and other Bodies of Knowledge

To provide the highest value products and services, the technical committees must be aligned with the expanding influence of the quality management domain into new industries and government services.

## The Market Forecast

Every three years since 1996, ASQ has conducted a Future Study to identify what factors or “key forces” will drive the role of quality in the world. The most recent Future Study, *In The Chase*, was conducted in 2005 and concluded that profound changes are coming for people who work in quality.<sup>1</sup> That study also showed that some of the trends evident in 1999 are continuing, even if they are shifting in the context of global change (Table 2).

While quality is increasingly seen as “everyone’s job,” the traditional role of the “quality professional” seems at risk. However, as Grace Duffy states, “I see nothing but blue skies for the quality professional. There is enough work out there for all of us. It takes personal initiative to seek the skills and abilities associated with the career path we prefer.”<sup>2</sup>

The QMD technical committees are being realigned to help provide media content—in print, web, and face-to-face—for professionals to grow their skills and abilities for the future.

## The New Technical Committees

The Division's new technical committees are based on the findings of the Future Studies and the consideration that we must continually reinvent ourselves to avoid commoditization of our knowledge and skills. Therefore, we wish to focus our committees upon future themes while building on our traditional strengths. In producing excellent content over the last couple of years, some of the technical committees already fulfilled their mission and those resources need to be redeployed. Most of the nine previous committees are being transformed into seven committees that will align with the following future themes:

**Table 2 – Forces of Change from All ASQ Future Studies<sup>1</sup>**

1996	1999	2002	2005
Changing values	Partnering	Quality must deliver bottom-line results.	Globalization
Globalization	Learning systems	Management systems will increasingly be absorbed in quality function.	Innovation/creativity/change
Information revolution	Adaptability and speed of change	Quality will be everyone's job	Outsourcing
Velocity of change	Environmental sustainability	The economic case for the broader application of quality will need to be proven.	Consumer sophistication
Increased customer focus	Globalization	Global demand for products and services will create a global workforce.	Value creation (quality for all stakeholders)
Leadership	Knowledge focus	Confidence in business leaders and organizations will decline.	Changes in quality approach from processes to systems
Quality in new areas	Customization and differentiation	Customer expectations will continue to rise.	
Changing quality itself	Shifting demographics		

**People & Systems**—To explore and enhance the interactions between people and management systems, including integrated management systems, ISO-9000 and other standards, quality management information systems, and environmental/social responsibility.

**Baldrige Criteria for Performance Excellence**—To extend the practice and benefits of the Malcolm Baldrige criteria beyond manufacturing into other industries such as healthcare, education, and government.

**Program Management**—To develop the interaction of quality management systems with programs (sets of projects) and program portfolios, especially where programs rely on the sharing of global knowledge and systems.

**Innovation & Value Creation**—To extend problem-solving and optimization methodologies into creative design practices to satisfy increasingly sophisticated customers.

**Performance Excellence**—To improve the effectiveness of established methodologies and standards such as PDCA, Lean Six Sigma, and ISO by root cause analysis and corrective/preventive management practices.

**Globalization & Supply Chain Management**—To enhance global competitiveness considering both out-sourcing and-in sourcing, management systems, and information technology.

**Enterprise Risk Management**—To establish systematic approaches to managing risks, the multiple effects of risk drivers, and mitigation strategies on a business-wide basis.

The new committee organization is shown in Figure 1. Your QMD Council has approved these committee teams, as we believe they will enhance our efforts to promote “Excellence in People, Process, and Performance.”

We are seeking at this time to fill the chairs and member positions, and I would like to encourage your expression of interest!

**Expectations for the Technical Committees**

We are in the process of developing a rolling, 18-month schedule to develop high-value content that will be distributed through print, web, and face-to-face initiatives (i.e., conferences, courses). The role of each technical committee will be defined in a charter over the next few weeks and continually assessed against new market information. As the R&D arm of the Division, we will develop and grow the committees that best match the future needs of our members, and we will create or reduce committees as required.

(ALIGNMENT OF THE QMD TECHNICAL COMMITTEES, continued on page 12)

(ALIGNMENT OF THE QMD TECHNICAL COMMITTEES,  
continued from page 11)

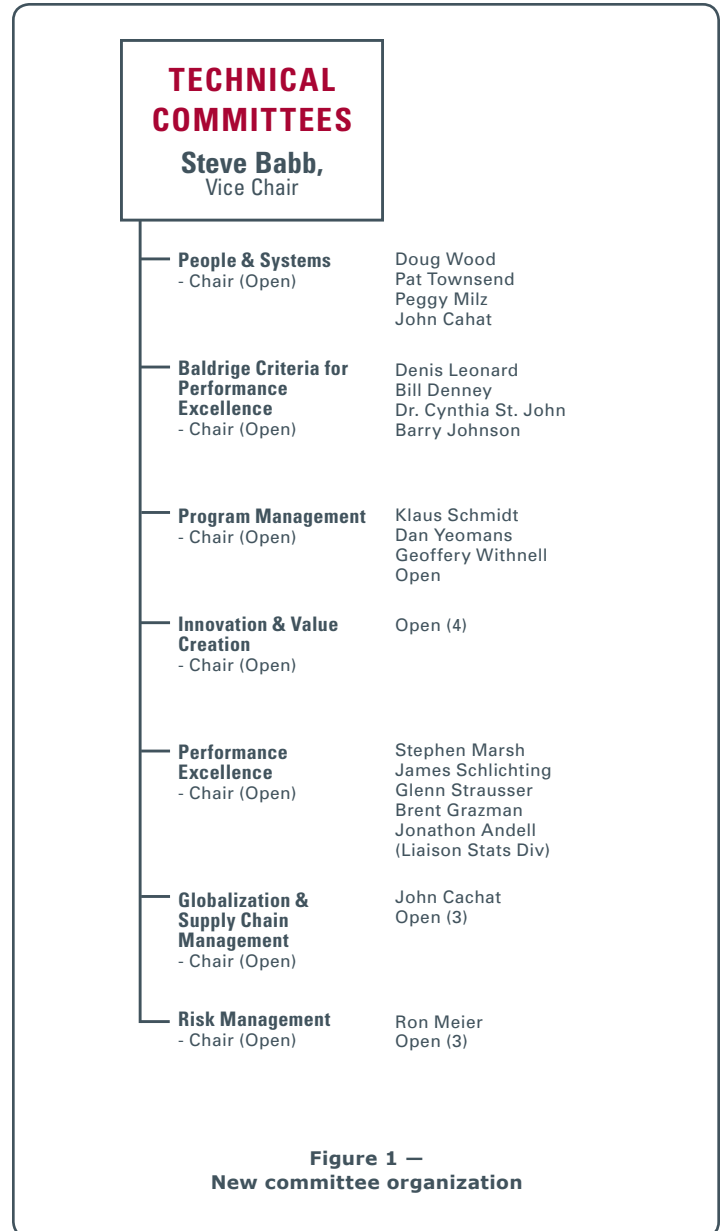
**Would You Like to Contribute to a Technical Committee?**

Please contact us (sbabb@REALBalancedSolutions.com or virginia.carr@totalsystemsdesign.com ) if you would like to be a part of one of these exciting new technical committees, either as a member or as chair. As you will observe from the organizational chart, some of the committees need several new members, in particular Innovation & Value Creation, Globalization & Supply Chain Management, and Risk Management. I would really welcome your involvement, and I can assure you that you will enjoy contributing your talents and knowledge for the future benefit of our members. Thank you.

**Footnotes**

1. 2005 Futures Study: In the Chase. American Society for Quality, 2006, [http://www.asq.org/strategy/pdf/asq\\_futures\\_study\\_2005\\_brochure.pdf](http://www.asq.org/strategy/pdf/asq_futures_study_2005_brochure.pdf)
2. Ibid. p. 13

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**Figure 1 —  
New committee organization**

# An In-Depth Look at Management Elements and Methods in the CMQ/OE Body of Knowledge

By Carol Kurtz, CMQ/OE, CQE, CQA, Vice Chair Operations

The last issue of the *Forum* provided an in-depth review of Strategic Plan Development and Deployment, one of the seven major areas in the CMQ/OE Body of Knowledge (BoK). This issue focuses on the third element of the BoK: Management Elements and Methods. The seven elements provide the foundation of our work as leaders and managers, and the remaining elements will be reviewed in order in subsequent issues of the *Forum*. The elements are:

1. Leadership
2. Strategic Plan Development and Deployment
3. Management Elements and Methods
4. Quality Management Tools
5. Customer-Focused Organizations
6. Supply Chain Management
7. Training and Development

## Management Elements and Methods

There are many management theories and models available to management professionals. While some may work better than others in specific circumstances, none alone is “the magic bullet” of successful management. These principles, theories, methods and tools provide foundations and frameworks that managers in various disciplines can apply as different situations require. There are 32 questions in the exam on these topics from the CMQ/OE Body of Knowledge.

### Management Skills and Abilities

The subcategories in this section discuss the skills and abilities a quality manager needs to effectively communicate organizational visions, missions, and strategies to achieve goals and objectives.

The CMQ/OE understands and applies the *principles of management*, such as planning, leading, organizing, delegating, controlling, and staffing. These activities are carried out for all business processes at varying degrees of depth and complexity.

Many *management theories* have been developed, such as MacGregor’s Theory X and Y, Ouchi’s Theory Z, Herzberg’s two-factor theory, and others. Management theories are usually linked to *management styles*. These theories and styles are influenced by organization size, industry type, and position in the market. How people interact within the models can be best understood by using some behavior tools such as the Myers-Briggs type indicator or the dominance, influence, steadiness, conscientiousness (DiSC) model.

In order to achieve organizational objectives, it is necessary to understand the importance of the *interdependence of departments or functional areas* as well as relationships among people. These have different names in different organizations, but the functions usually cover activities such as human resources, engineering, sales, marketing, finance, research and development, purchasing, information technology, logistics, production, and service.

The CMQ/OE uses *basic human resources management* techniques for employee selection and professional development, including coaching, setting goals and objectives, conducting performance evaluations, and creating recognition programs. Additionally, it may be the role of the quality manager to ensure that quality responsibilities are present in job descriptions for all positions in an organization.

Basic *financial management* skills include the ability to read and interpret the language of senior management. Finance tools include income statements, balance sheets, statements of cash flow, ratios, product/service cost structures and Balanced Scorecards. Developing and managing budgets help to establish and monitor required activities and projects. Calculating return on investments (ROI) or assets (ROA) helps the CMQ/OE

to sell quality initiatives and improvement projects to decision makers.

In addition to managing finances, certified managers are expected to use basic *risk management* techniques to identify, control, and mitigate risk. Potential forms of risk include legal actions, environmental violations, customer nonpayment, raw material defects, accidents, and many other business disruptions. Some techniques include incident analysis, auditing financial statements, making and using process maps, and doing Failure Mode and Effects Analysis.

*Knowledge management* techniques are used by managers to identify and collect internal knowledge (core competencies) and best practices, to understand and share lessons learned, and to adapt and use this knowledge in new situations. According to Westcott in *The Certified Manager of Quality/Organizational Excellence Handbook*, an effective knowledge management process supports the capturing, processing, and storage of information in such a way as to make it available to those who need it while also maintaining the necessary security of that information. Some typical hurdles that must be overcome in order to implement these techniques include lack of top management support, failure to consider strategic importance, and ineffective organizational structures, as well as many others.

### Communication Skills and Abilities

*Communication basics* are fundamental skills required by successful managers. Not only must messages be clear, but the intended meaning must be correctly understood by the recipient. The CMQ/OE selects and uses appropriate communication methods to deliver messages in a variety of situations. The following communication

(AN IN-DEPTH LOOK AT MANAGEMENT ELEMENTS AND METHODS, continued on page 14)

(AN IN-DEPTH LOOK AT MANAGEMENT ELEMENTS AND METHODS, continued from page 13)

attributes must be considered:

- Selecting the best methods, such as written, oral or nonverbal
- Using formal or informal communication methods
- Listening and questioning skills
- Using media appropriate for the circumstances
- Using appropriate interpersonal skills, such as empathy, tact, and friendliness

In addition to face-to-face communication challenges, *communication in a global economy* presents the challenges of communicating across different time zones, cultures, languages, and business practices. Communication and technology influence and affect the way data and information are delivered. This includes improved information availability, its potential negative influence on interpersonal communications, and the proper (and constantly changing) etiquette for electronic communications. Certified managers are expected to have the skills to allow them to identify ways of meeting these challenges.

### Project Management

Unlike operations, which are ongoing, projects have a beginning and an end. So the certified manager uses project management skills in addition to the usual management and communication skills to complete projects. Major project phases, and related tools and methods, include:

- Initiating and proposing—The manager uses *Project management tools* such as benefit-cost analysis, potential return on investment (ROI), estimated return on assets (ROA), net present value (NPV), internal rate of return (IRR), portfolio analysis, and risk assessment to analyze project risk, feasibility, and priority.
- Planning and estimating—*Project planning and estimation tools* for project

related costs include critical path method (CPM), Gantt chart, PERT, work breakdown structure (WBS), activity network diagram (AND), as well as others.

- Designing deliverables—The tools used in this phase depend on the type of project being planned.
- Implementing, measuring and monitoring—To measure and *monitor project activity*, tools such as cost variance analysis, milestones, actual vs. planned budgets are used.
- Evaluating and closing—*Project documentation*, such as written procedures, project summaries, lessons learned, are used to evaluate and document projects.

### Quality System

The quality system can be described as the organizational structure, responsibilities, procedures, processes and resources for ensuring that a product, process, or service will satisfy given needs.

The certified manager will be able to develop and monitor the *quality mission and policy* and ensure alignment with the organization's broader mission. Through quality planning methods, he or she will develop and deploy the quality plan and ensure that it is documented and accessible throughout the organization. Quality system effectiveness will be measured using various tools to evaluate the effectiveness of the quality system, including balanced scorecard, skip-level meetings, management reviews, internal audits, feedback from internal and external customers, warranty data, traceability and product recall process reviews.

### Quality Models and Theories

There are many quality models and methods available to the CMQ/OE, and he or she will be able to define, describe and understand the differences and similarities between them.

Models, guidelines and standards include the Malcolm Baldrige National Quality Award (MBNQA) and various ISO Quality Management Systems such as ISO 9001, ISO 13485, ISO/TS16949, and other third party standards. Other quality methodologies include programs such as total quality management (TQM), continuous quality improvement (CQI), Six Sigma, and benchmarking.

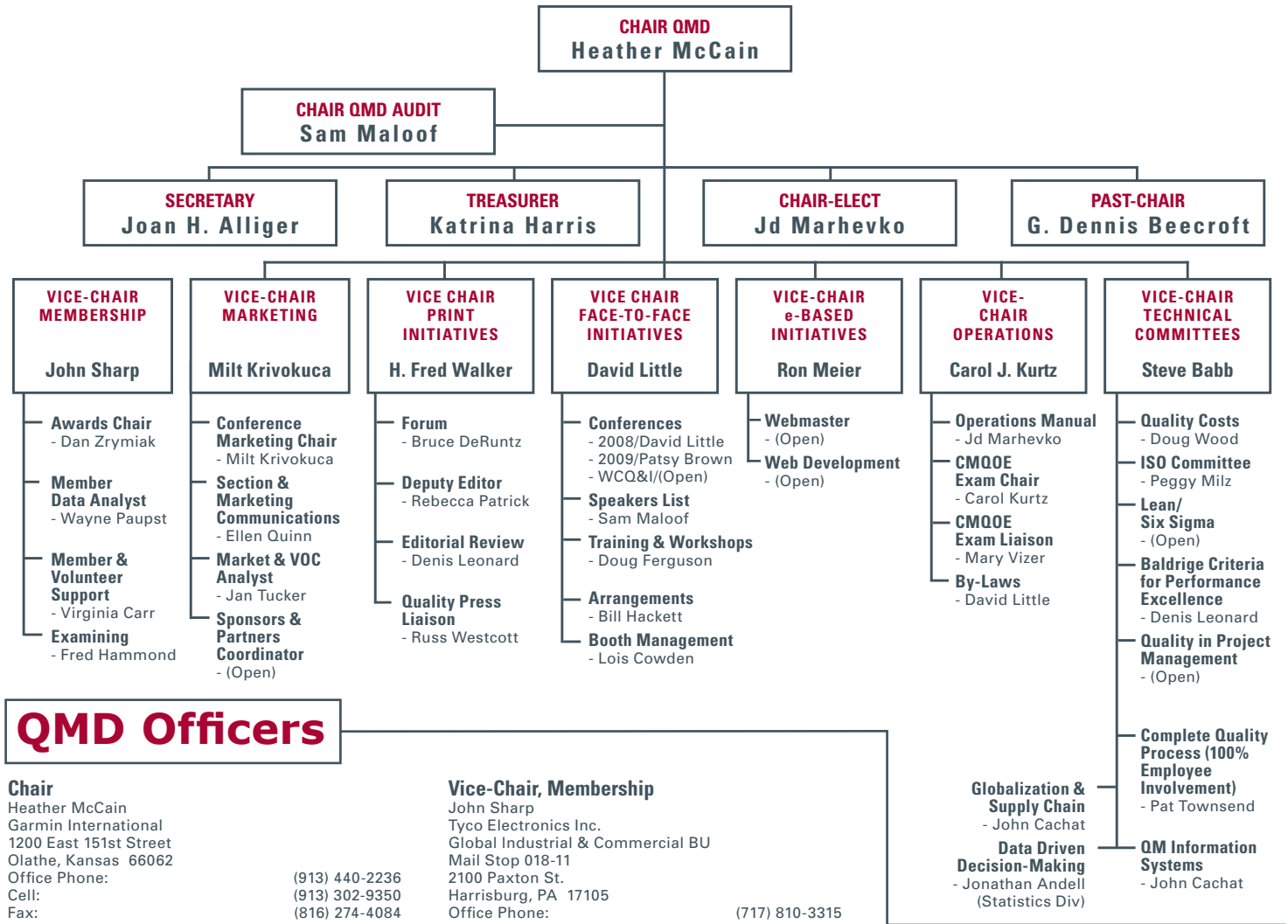
The CMQ/OE has an understanding of major quality philosophies and will be able to define and describe the basic methodologies and theories proposed by quality leaders such as Deming, Juran, Crosby, Feigenbaum, and Ishikawa.

The next *Forum* article in this series will focus on the next two categories: Quality Management Tools and Customer-Focused Organizations. For more information on these topics, consult the CMQ/OE Body of Knowledge and *The Certified Manager of Quality/Organizational Excellence Handbook*, by Russell T. Westcott, which were used as a references for this article.

### Volunteer Opportunities

If you are currently a Certified Manager of Quality/Organizational Excellence and you are able to help as a Subject Matter Expert (SME), please e-mail your contact information to [MMartin@ASQ.org](mailto:MMartin@ASQ.org). Two (2) CEU Credits are given for participation in our workshop sessions and can be used towards your certification renewal as a CMQ/OE. Travel expenses are reimbursed.

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To see a QMD organization chart and complete roster of QMD officers, committee chairs, and volunteers, go to the QMD Organization pages on the QMD Web site at [www.asq-qmd.org](http://www.asq-qmd.org).

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