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I'm Sorry, Sir, There's Nothing We Can Do

By Thomas Priesser

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The Initial Situation

I deposited $1000 into my bank account via a local branch's ATM. When I got the receipt for the deposit, it suggested that I had actually deposited $10,750. Now, that's not bad if you get to keep the money, but considering this was at one of the country's biggest banks—one big enough to have borrowed billions from the government under the bailout plan—I knew I had little chance of that. So I parked and went inside the branch to let someone know what happened. I explained the issue, they apparently understood, and they said that since it was a Friday, the matter would be resolved by the following Monday at noon. Satisfied, I left the bank.

Everything was fine on Monday when I used my card, so I assumed the matter had been resolved the way business problems should be: transparently, from the customer's point of view. Wrong! At about 5:00pm, I tried to use my bank card to charge something at a restaurant, and it was declined. We tried my wife's card and the same thing happened. It didn't take a genius to figure out that the errant deposit was related to the current situation. We paid cash.

The Organizational Failure

I called the number printed on the back of the card, hoping to resolve the issue in the next few minutes, but things rarely work out that neatly. After providing my social security number, account number, pin number, and everything else short of a retinal scan, I heard a human being come on the phone to ask about my concern. The clock started. I explained. He listened. He asked questions. I answered. He thanked me for my patience. I thanked him for his help. He said he would need to transfer me to someone else because he could not help me to resolve the problem. He asked if I could wait "on hold" and I said I could. He thanked me. Awful music played. Time passed. A new person picked up the call, and asked me for my address, phone number, account number, social security number, and how she could be of service. My response was to repeat my whole story and to answer the same set of questions. By the time I was told again, "I'm sorry, sir, there's nothing we can do," I had lost my patience, plus two hours and eight minutes of my day.

"What do you mean there's nothing you can do?"

"There's a five-day hold on your account because the deposit was over $10,000."

"I only deposited $1000, so why don't you just release that amount and put a hold on the remaining $9000?"

"We can't do that, sir. It's an automated system."

"Are *you* also automated? How about your CEO and the executive team? How about all those tellers and branch managers? Don't tell me you can't trust me for a measly thousand dollars when I've had the account for nineteen years, and I've recently trusted your company for $40 billion in treasury revenue!"

(I'm Sorry, Sir, There's Nothing We Can Do, continued on page 4)

Chair's Message

By Jd Marhevko

Depending on where you live, the cold (or colder) winter weather is upon us! I live in the Detroit area, where the weather can change unpredictably. I invite you to escape the cold weather and join the QMD for another great conference in sunny Orlando Florida at the Rosen Centre Hotel on March 17th and 18th. Sign up for a behind-the-scenes tour at NASA (the space shuttle is scheduled to launch that week!) or visit Wheeled Coach industries, the largest single-brand manufacturer of ambulances in North America.

These tours are scheduled on Wednesday, March 16th, one day in advance of the conference. They are provided to enable participants with benchmarking experiences. (Note: You must register to attend, as group sizes are limited.) Several training and certification preparatory courses are also being offered in advance of the conference. Various certification exams are scheduled for after the conference on Saturday, March 19th.

We have four outstanding keynote speakers from a variety of industries to help participants learn about effective networking, business development, and the service industry:

- Jerry Ross—Executive Director of the Disney Entrepreneur Center
- Lynne Waymon—CEO of Make Your Contacts Count
- John Timmerman—VP, Global Guest Experience and Rooms Operations for Marriott International
- Mike Micklewright—A Deming impersonator, author, business and quality consultant and trainer

Check out the caliber of some our speakers and selected sessions from our 2010 QMD Conference. The link is http://www.asq-qm.org/2010-video-files-and-podcasts.

Please visit the QMD web site at www.asq-qm.org or www.asq.org to learn more about the conference and how to register to attend.

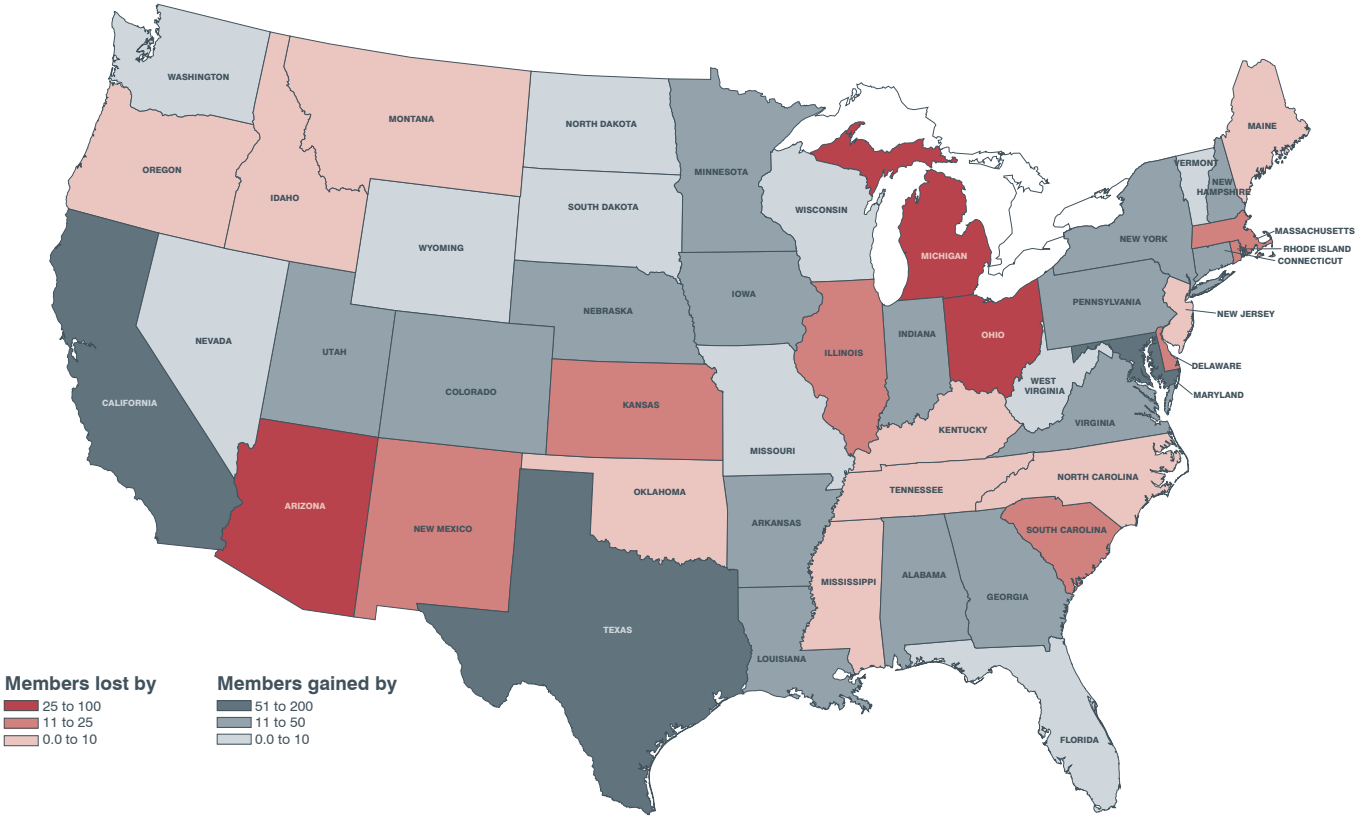
The QMD has a dedicated cadre of conference and council volunteers who work hard to come up with inspiring themes, excellent speakers, and exceptional courses for our conferences. These volunteers work countless hours to provide value to you, our members, and the professional community at large. The conference team focuses on creating a value-based experience.

The conference team uses the QMD vision and mission statements and VOC feedback to determine conference themes and keynote speaker topics. The ultimate goal in achieving organizational excellence is to sustain it! To achieve that, there needs to be "Excellence Through People, Processes, and Performance," the theme for the 2011 conference.

To ensure that we were current with our VOC feedback and strategic planning, the QMD council held its annual joint QMD/ASQ Strategic Development and Deployment (SDD) workshop at ASQ headquarters in Milwaukee in June. We reviewed our VOC inputs and our performance levels and worked with the ASQ team to adjust and enhance our SDD plan. The QMD completed 92% of its 38 planned tactical objectives. The three targets that we struggled with were:

- Not meeting the conference budget…We missed $1K on a $172K budget (Geesh, talk about tough!)

2010-2011 QMD Demographics of Loss in Membership in the USA



- Not meeting the QMD budget…Due to the conference and *Quality Management Forum* mailing costs
- Not retaining our full QMD membership. The economy hit a lot of us hard.

By following the Hoshin Kanri (X-Matrix) process, we were able to effect corrective actions, develop our key tactics for the 2010–2011 year, and refine our key performance metrics. One key point for us across the year was that our membership demographic continues to be heavily impacted by the economy.

Like the majority of the ASQ divisions, the QMD has seen a loss of core members across the "rust belt" states, largely due to the economic shifts. Please help us to pass the word that if you know of fellow professionals who have been displaced and cannot afford to maintain their ASQ membership, ASQ can accommodate up to two years of free membership for those who have been ASQ members for five years or more. Please direct them to the ASQ.org website for more information on how they can retain their professional membership and services if they have been negatively impacted in this economy. This will enable them to stay professionally connected and access key sources of learning and career materials. Regardless of ASQ member status, any quality professional or other interested party can access the QMD website for materials and information at www.asq-qm.org.

If you haven't already, please join us on our QMD Linked-In site at http://www.linkedin.com/groups?gid=1776051. The caliber of content and professional support has been excellent.

Thank you for being a QMD member! I hope to see you at our conference. I want to emphasize that your QMD leadership team is eager to provide the support and services that you need.

Jd Marhevko
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(I'm Sorry, Sir, There's Nothing We Can Do,
continued from page 1)

"I'm sorry, sir, there's nothing we can do. The hold will be released on Friday."

"Friday! That's an entire workweek. What am I supposed to do for gas and food?"

"I'm sorry, sir, there's nothing we can do."

The Organizational Success

So much for transparency in customer service systems! As it turns out, I spoke in person the next morning with my branch's executive manager, a vice president. She called the bank's headquarters and read the riot act to someone and had the matter straightened out in a few minutes. The vice president solved my problem, but not the bank's. All that happened was that someone else accepted the vice president's pain so she could be relieved of it. It was a good solution for me, and one I was thankful for, but it did not fix the problem for the next customer.

The Root Cause Analysis

When a financial software development analyst asks a banking function analyst the question, "How do you process deposits?" one of the follow-up questions could reasonably be, "What do you do to rectify a mistake when the system incorrectly accounts for a deposit amount?" This is not a leap-of-faith level question. The answer should be part of the best practice model—the "2B" analysis. I understand that there are more what-if circumstances than any team can be asked to effectively consider, but an erroneous deposit amount is not one of them. It should be an obvious thing to plan for.

Administration can rectify an internal accounting problem; HR can resolve a benefits problem; operations can improve a performance issue; and manufacturing can resolve a production problem. That's because all these areas are using technology they understand and, to some extent, control. They cannot necessarily change the overall computing processes, but they can change written operating procedures to enable them to take an action that the computer system cannot effectively perform—a formalized work-around, if you will. They can, in other words, usually fix their own problems.

Unlike these other areas, the IT area has little control over its complete and functional system. Those "operating" it are there to keep it running, not to change it. When you run a system you did not develop and cannot change, you become an appendage of the system rather than one who uses the system to accomplish a task. Since you didn't design or build it, and since your job is to "maintain" it rather than to "improve" it, it's easy to avoid culpability for the problems it creates for your ultimate customers: the millions of account holders. You never even see them.

So What?

It's not easy to see the future. Karl Marx, in his unpublished *Economic and Philosophical Manuscripts of 1844*, later incorporated into his magnum opus, *Das Kapital*, spoke about the alienation of workers from the means of production. He was thinking of a world of machine technology where a worker spent hours per day building a single component in the supply chain, knew little about the final product, could not control the production processes, and became alienated from the work itself. She could build an axle, but not a car. The blacksmith's work had been parsed. In the case of IT, it's even worse.

Not only are workers who build these systems unable to build complex systems on their own—or even cobble them together effectively from component parts—they are actually of little use to an organization, with rare exceptions where adequate knowledge management practices are in place. A teenage kid with a manual, some parts, and a few tools can get a junkyard Chevy running again, which then gets him to school and takes him on a date. Where's the parallel in IT? I'm not saying that computer software, firmware, and hardware do not improve performance, or that a system can run without skilled people attending to it; I am saying that cadres of IT people standing idly by waiting for a problem to emerge that they (in general) cannot ameliorate, is a fantastic waste of company resources. Furthermore, these "resources" have no ability to interact favorably with customers.

I say *favorably* in the full knowledge that 99% of a system runs with the sort of transparency I agree with as a customer. When is the last time you called the ATM banking center to mention how wonderfully the machines were behaving? Yet, if a customer has an aggravating problem, say once a year, that uses up two plus hours on the phone and still cannot be resolved without pleading the case to a company executive the next business day—and you multiply that by five million customers—you have spent more than ten million hours on the phone failing to resolve problems…and somebody pays that bill!

If you divide the five million annual complaints by 365, you get about 13,700 complaints a day, and if you assume that a single representative hired to say that "nothing can be done" handles three such calls a day in a five-day work week and, further, that the phones operate 80 hours per week, then you need several hundred people employed for the sole job of saying that they can't do anything about your problem—and that's just for the long calls! What would *you* do with a business model like that?

So what? The answer is that people engaged in the "fun" side of the IT world need to begin to analyze this activity from a point of view that does not now exist. Project managers building systems want to meet or beat budget and schedule requirements and want the component and system test criteria to be successful so they can move to the next project—there is no customer

except the client commissioning the build. Software businesses want to develop, for example, better business rules engines to account for more idiosyncrasies in business management; they are concerned only about market share, so they measure sales and revenue versus development costs. Companies that deploy large Enterprise Resource Planning (ERP) systems want their programs to work, so they measure the number of "down" days, or slow downs based on system volume. Suffice it to say that ABCDEF.com wants you, a consumer, to be able to buy from its website easily and quickly, and that's where the production time and resources are spent when developing the system. It is typically not as easy or quick to get a refund from the same website.

Such systems, once built and installed, become their own fiefdoms, and the people who serve them are competent IT professionals whom nobody knows or sees unless they want a new application put on their business laptop, or they make a complaint about the network being slow. But these are not people who are there to crack open a system's code and eliminate a customer's problem. They can't even do that for the company's own problems, let alone for customers'.

From a quality management standpoint, the entire technology industry is looking in the wrong direction. For us to live well with technology—especially as largely non-technical consumers—its performance must be measured differently—and in relationship to consumers. Computer science, industrial engineering, and allied fields must look at how consumers of, workers in, and users of automated services are increasingly powerless to solve problems. We live in an environment where even the phrase "computer problem" is an excuse so grand as to exonerate the entire field from taking any responsibility. "Our computer's down" ends all conversation.

Conclusions

I suggest that more functional analysis time be spent when large-scale computer software systems are being developed. The basis of all ERP systems is a set of Best Practices for the industry that the tools are being built to make more efficient. It is a *business rules engine* developed by a programming team and a set of industry function analysts working for the company that develops the tool. They know banking, for example, but the design of the software is pitched at internal controls—how the bank does its accounting, when it posts to its ledger, and so on. At this stage, the *customer* of the software is seen as the company that deploys it. But this is too narrow a definition. The ultimate customer—the customer doing business with the company purchasing the tool—is not sufficiently considered.

A second opportunity to consider the ultimate customer is when the newly purchased software is being customized to (for example) the bank's preferred processes, as defined in the "2B" model—the way the company wants its business processes to run under the new software system. Again, functional analysts and programmers, using the 2B model, are trying to ensure that the system reflects the processes extant in the bank's operating environment, and they are failing to consider adequately whether the system addresses the kind of data that the bank's customer service personnel might contribute.

Finally, the operating business needs to have a documented set of override procedures that address just the sort of customer issues illustrated in this paper. People have to be able to countermand the rigidity of the binary switch—everything is not a yes or no—and make decisions necessary for both cost control and customer satisfaction. At a minimum, the output of such an override process would be a "lessons learned" list, or maybe just a list of problems that could be analyzed and evaluated for future amelioration.

Second- and third-order effects—the consequences of actions taken—are poorly considered in the software development process because interactions between the developers and the purchasers do not fully account for the way the world outside the firewall interacts with the system. It doesn't matter whether it's a bank that cannot fix a system-generated accounting error, a convenience store whose Point of Sale (POS) system will not account correctly for an advertised price, or any other case. When a problem is identified, there must be a better way to solve it than simply to say, "I'm sorry sir, there's nothing we can do." Of course there is. Just commit to doing it.

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Using QI Skills In Daily Work

By John W. Moran, Grace Duffy, and Beth Pierson

Overview

This article discusses a process that team members can use to apply quality improvement (QI) tools and techniques learned in team training. Following the discussion, it provides a case study showing how one team member applied the tools learned during the teaming experience and used them in her daily work to make continuous improvement.

How to Begin Using QI in Your Daily Work

"If you add a little to a little and do this often enough, soon it will become great."—Hesiod, 8th century BC Greek Poet

The quotation above is the essence of quality improvement in daily work—many small, continuous improvements that add up over time. Quality improvement in daily work is called "daily work management" (DWM) because it uses the tools and techniques of quality improvement to make our daily work more customer-focused and manageable. DWM is the continuous improvement of the day-to-day work we perform.

Organizations must train their workforce at all levels in the tools and techniques of QI to institute organization-wide DWM.

1. **What do you spend your time on?** Using a check sheet, go back through your calendar for a couple of months to determine what categories you spend your time on. Most people find meetings and e-mails are the major categories, especially at supervisory and managerial levels. This is fine for a first pass, but to use QI in your daily work, you need to be more specific. What type of meetings, how are they related to your job, how much time do they take, are they regular or random meetings? Answers to these questions help you determine what work you do on a daily basis. It is a good idea to continue to monitor where you spend your time, in order to capture any changes that take place.

   Some QI tools that can help determine where you spend your time are:

   - Check or tally sheets
   - Concentration diagrams (pictorial check sheets)
   - Activity/Time-logs
   - Sampling—pick days to analyze through a random number generator
   - Pie or Pareto charts to display the data

2. **What are your key processes?** Dr. Deming said, "If you can't describe what you do as a process, you don't know what you're doing" (thinkexist.com). Once you understand where your time is spent, it will point to the critical processes you perform on a regular basis. The next step is to describe these critical processes with a few high-level process flow steps: usually 5–10 (Collett, DeMott, and Moran, p. 2). These flow process diagrams of your critical processes describe the daily work you do on a regular basis.

   A QI tool to help develop a flow process diagram is a SIPOC+CM Form (Bialek, Duffy, and Moran, pp. 183–185). This form indicates who your suppliers are, where the inputs come from, the key elements of the process, where your output goes, who the customers of the process are, any constraints on the process, and what measures are used to indicate how the process is performing. Another QI tool that can be used is the Flow Chart Summary Matrix, which helps document resources that a process consumes in making its output.

3. **Do you know your customer's needs and wants?** For each key process identified and mapped, describe the customer's needs and wants for that process. The first pass will be the process owners' understanding of what they think the customer's needs are. Once this understanding is documented, it should be validated with the customer for alignment. If the alignment is not confirmed by the customer, the needs should be corrected and any modifications analyzed to see if the process can deliver the updated requirements.

   Once you have agreement with your customers on their needs and wants, you should perform the same process with your suppliers to make sure they understand *your* needs and wants.

   Some tools of Quality Function Deployment (Duffy, Moran, and Riley, Ch. 4) can be used to help with the analysis of customer wants and needs:

   - Process steps impact Customer Needs Matrix
   - Kano model
   - Understanding/interpreting the Voice of the Customer Table
   - Internal/external Customer Needs Matrix

4. **Do you control and own each step in the processes defined?** A key part of DWM is that there be clearly defined owners who understand which parts of the process they control. Process ownership is important because it establishes the roles and responsibilities for the process and allows those doing the work to make improvements.

   The Control and Influence Matrix (Bialek, Duffy, and Moran, pp. 404–405) is a QI tool used to check each process step to determine if you have control over it or need to involve others to make changes.

5. **Do you have measures for the process?** Once the process is defined, you need to understand how it is performing. You must verify whether the process is stable, repeatable, and in control. Measurement helps you understand how well you are doing, if you are meeting your goals, if your customers are satisfied, and if your processes are in control. You must determine what measures should be developed as Key Process Indicators (KPI). The following are some major KPIs.

   - *Effectiveness*—Does the process output conform to stated requirements? (This is doing the right things.)
   - *Efficiency*—Does the process produce the required output at minimum resource cost? (This is doing the right things right.)
   - *Quality*—Does the output meet customer requirements and expectations?
   - *Timeliness*—Does the process produce its output correctly and on time?
   - *Productivity*—How well does the process use its inputs to produce its output? (This is the ratio of the amount of output per unit of input.)
   - *Output*—How much does the process produce in a given time period?

   Depending on your process, the KPI you decide on may be a combination of the above or others. It is desirable to have proactive measures that show what is happening now in the process rather than reactive measures that show what has happened. The thing to remember is that whatever measures you decide upon should give you a clear indication of how the process is operating and let you know when action must be taken.

6. **Can you monitor and control the process on a daily basis?** Once you can measure your process, you need to monitor and control it on a daily basis. Monitoring and control are important activities because they indicate when the process is out of control and corrective action needs to be taken. Monitoring, control, and reaction activities of important processes are necessary to maintain performance levels and to hold the gains obtained from improvement activities.

   Some QI tools useful for monitoring and control are:

   - Pareto charts
   - Histograms
   - Scatter diagrams
   - Run charts
   - Control charts
   - Stem and leaf plots

7. **Can your processes be improved?** Improvement of daily work is the cornerstone of a quality system. Monitoring and control activities point out the problem areas. Using the Plan-Do-Check-Act (PDCA) cycle helps analyze and develop solutions to identified problems. The following QI tools can help prioritize, analyze, and develop solutions to problems:

   - Problem selection grid
   - Cause and effect diagrams
   - Solution and effect diagrams
   - Stop-Start-Continue matrix
   - Impact action plots

8. Repeat steps 1–7 on a regular basis to check the process's performance and uncover additional improvement opportunities.

Daily Work Management Case Study

Sally the epidemiologist often feels as though her day is not her own; rarely can she get ahead on her workload. She is responsible for investigating disease outbreaks, surveillance, planning and preparedness activities, writing reports, responding to community requests for data and various other things. No matter how many To-Do lists she makes, something always comes up that distracts her from her original priorities. Sally would like to better manage her daily work, and she remembers that a colleague mentioned some helpful quality improvement tools that she could use.

Sally first wants to identify what she does on a typical day and how much time it actually takes. Her favorite method is to use a random number generator to select one day every week to analyze. This week Monday was selected, and Sally spent ten minutes reviewing her email to see what she had accomplished on Monday, before quickly filling out an activity log for that day (Table 1). She went back through her appointment calendar and emails for ten previous Mondays and found that the majority of her time was spent on communicable disease investigations.

Sally decided to analyze the communicable disease investigations, since they took up the bulk of her time on most days. Her analysis pointed to these investigations as one of the critical processes she performs on a regular basis. She thought if she mapped out the process she used to complete an

Table 1: Daily Management Activity Log

Activity	Category	Amount of time spent (minutes)
Pertussis, Salmonella	Communicable disease investigations	50
Norovirus	Food borne disease investigation	10
Grant updates	Planning and preparedness	25
Communicable disease reporting system updates	Monthly meeting	5
Phone calls and emails from hospitals	Surveillance	10

(Using QI Skills In Daily Work, continued on page 8)

(Using QI Skills In Daily Work, continued from page 7)

investigation, it might help her figure out where all her time is spent. So she found a template for a SIPOC+CM form and filled it out. See Figure 1 for Sally's example (Bialeck, Duffy, and Moran, pp. 183–185).

Completing the SIPOC+CM helped Sally understand the investigation as a critical process. Now she could investigate the customer needs and wants. To do this she made a list of potential customer desires and used a customer needs matrix as shown in Table 2. She listed potential customers and their needs as she understood them. Then she rated the perceived level of their satisfaction on a scale of 1–5, with 1 being low and 5 being satisfied. (She plans to use the last column after she contacts key customers to verify their needs and current level of satisfaction.)

While the customer needs matrix was useful, Sally needed more information. So she reviewed the process flow (SIPOC+CM) and other aspects of the process, and realized that she did not actually have control over all the pieces of her daily work. Without such control, the daily work had the tendency to manage her. Daily Work Management would allow Sally to be the driver of the activities, not the other way around. In the packet of information that her colleague had forwarded to her, Sally found a Control and Influence Matrix (Table 3). She sensed that by evaluating her level of control, she might refine the process so that she could manage her time more effectively.

Sally used the information from the SOPIC+CM chart to fill in the control and influence matrix. What she found was that she really had control only over the data management. She had some influence when she contacted the provider and the patient or the lab, and limited or no control over whether individuals returned her calls or picked up kits for testing.

Having control over a process isn't the only information Sally needs to manage a process; she needs to know a few more specifics. For instance, she needs to review the "how" of the process. Measuring certain indicators can help ensure that she is getting the results she wants.

Of several key process indicators, Sally chose to assess the timeliness and quality of her Daily Work Management tasks, particularly as they relate to managing the data. In this instance, that would mean she would need to review and/or input data into the disease reporting system within a short time frame. Sally decided to monitor the amount of time that had elapsed between notification of a disease and the first phone call to the patient. She also wanted to add a question about satisfaction to the end of each patient phone call (so she can fill in the customer needs matrix). Based on her reviews with key customers, she determined that a goal of 30 minutes would be appropriate to review data and make a phone call to the patient.

Table 2: Customer Needs Matrix

Customer	Needs	Satisfaction	Checked
Patients	Education, Prevention, Prescriptions	3	
Providers	Guidance	3	

Table 3: Control and Influence Matrix

	Control	No control
Knowledge	Data management [Do it]	Prescribing medication [Influence]
No knowledge	Receive disease reports from providers [Get help]	Patients don't return phone calls [Stay away]

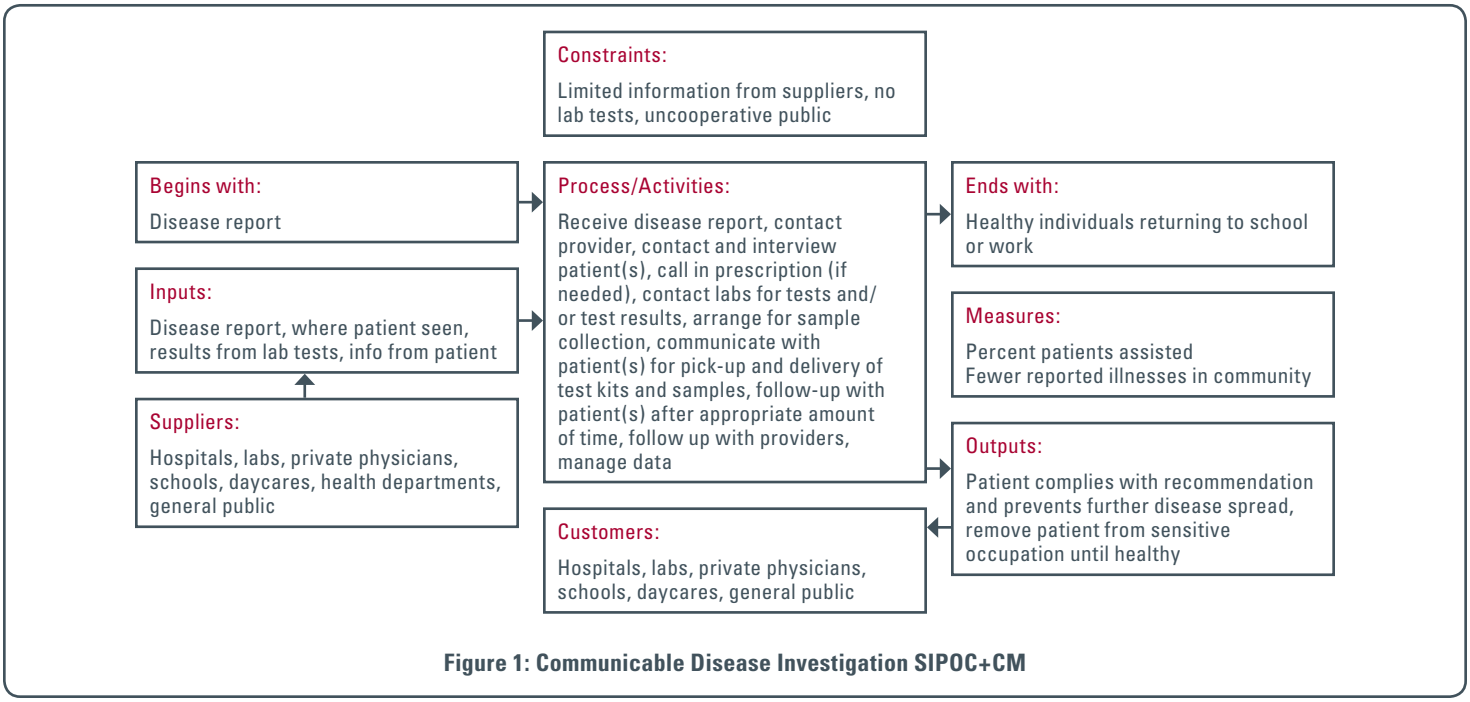

Figure 1: Communicable Disease Investigation SIPOC+CM

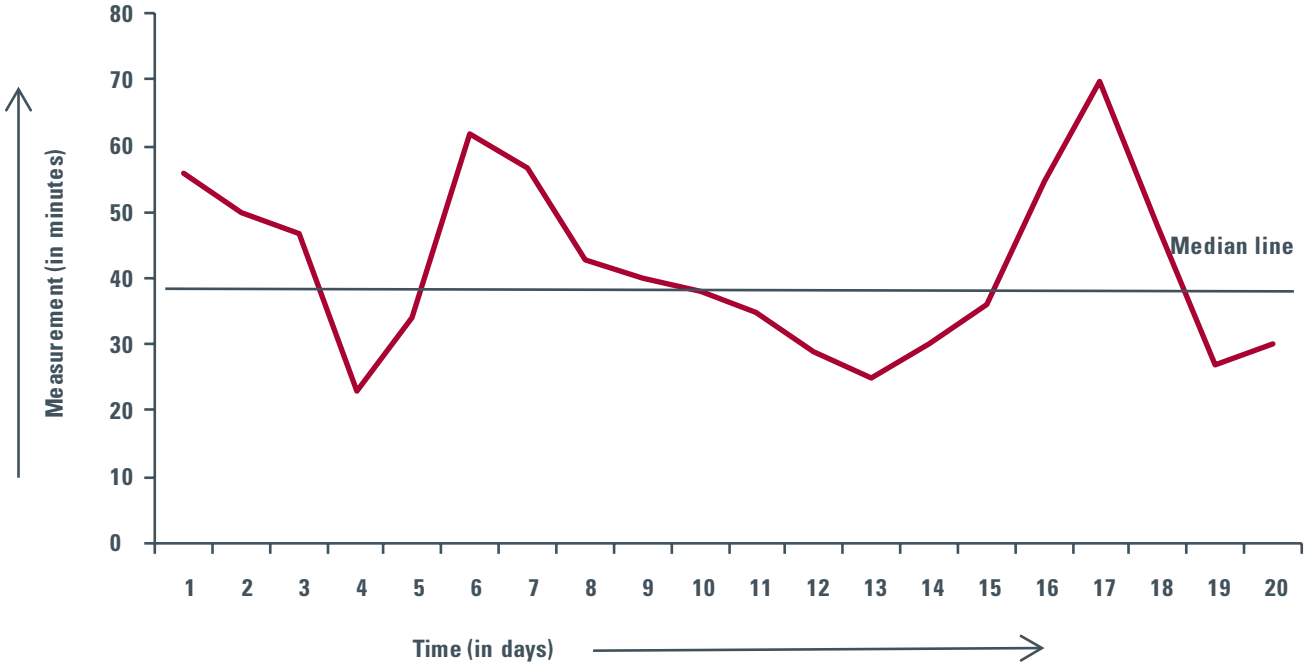

Figure 2: Run Chart

Sally decided to set up a run chart to track performance against her 30 minute goal. She set up a tracking log to record each time she reviewed or entered data into the disease reporting system and the amount of time that elapsed between notification and action. The run chart for the last 20 entries is shown in Figure 2. Since this was the first measurements Sally had made of the timing of her data input for this process, a run chart gave her an initial understanding of her performance on a real-time basis to see if she was close to the targets she had set for herself. The run chart showed that of the last 20 entries, the median amount of time that had elapsed between notification of a disease and the first phone call to the patient was more than her personal target of 30 minutes. A simple look at the run chart indicates that Sally has more to do in managing this part of her daily work. At this point she does not know whether the 30 minute target is too optimistic, or whether there are other improvements she can make to the routine she has for receiving the notification and making first contact with the patient.

Monitoring and control are important activities; they indicate when the process is performing in a stable enough manner to advance to the level of assessing whether the process is in control based on a longer term set of data. Sally's use of basic QI tools has indicated that she needs to continue monitoring her daily work before she moves on to more advanced tools, such as a control chart.

When reviewing the run chart, Sally realized that there were some inconsistencies in the amount of time it takes to complete the first steps of the investigation—receiving the data, reviewing it, putting it into the data management system, and calling the patient. As Sally had realized earlier, she had control over the data management piece, and so she decided it was the reviewing and inputting that needed improvement. Sally put together a simple cause-and-effect diagram to investigate further (Figure 3).

Completing the fishbone diagram helped Sally clarify some of the issues that could be directly addressed in the investigation process. She was able to select one of the categories identified and make changes accordingly. Sally also continued to monitor the timing and efficiency of her process so that she could systematically review the data and continue her improvement activities, using the DWM techniques she had learned.

Conclusion

Henry Ford is quoted as saying, "Quality means doing it right when no one is looking." This is a motto for why QI should be done in daily work—everyday—at all levels of the organization. However, Daily Work Management should not be apparent except for some up-to-date measurement charts on a wall or some employees meeting to solve a common problem using QI tools. It may show up as employees making a presentation using QI tools and techniques or a conference room containing a fishbone diagram on a flip chart from a previous meeting.

There are some signs which indicate that daily management is not yet a reality in your organization (roi-ally.com):

- The quality of the output of a process is different from shift-to-shift, location-to-location, person-to-person. This indicates a lack of standardized methods, poor training, or a lack of accurate metrics.
- The same problems keep recurring and you keep fixing them over and over again.
- Your work processes were never planned out and instead evolved over time by different people doing the job.

(Using QI Skills In Daily Work, continued on page 10)

(Using QI Skills In Daily Work, continued from page 9)

- Different areas doing the same work have different forms, collect different data, and may use different technology systems.
- Interacting processes have different goals and objectives. There is not a smooth hand off and things often get lost or delayed.
- There is a constant crisis mode of operation.
- Employees get blamed for problems that occur.
- Clients complain about lack of service or long waits.
- There is poor documentation of changes made to the process. Often changes are not communicated clearly to those involved.
- When veteran employees take a vacation or leave, problems arise because no one else knows how tasks are normally accomplished. They were never documented.

For Daily Work Management to be effective, everyone must understand how their process works, how the process interacts with other processes in the organization, and how it contributes to the strategic direction of the organization. Employees who feel ownership for their process and its output, utilize measurement consistently, have a customer/supplier orientation and understand the customer's wants and needs will be most successful integrating DWM. Equally important is that there be an evolving culture in which the status quo is constantly challenged. We have seen how Sally began her journey using some very basic quality improvement tools, which helped her to organize her Daily Work Management tasks. Ultimately, she was able to measure real-time performance against her own personal targets. Individual performance tracking does not have to be complex. Daily Work Management is a personal target and a personal success story. The more team members who utilize the DWM skills and tools, the sooner we will experience a culture of quality improvement throughout the whole organization.

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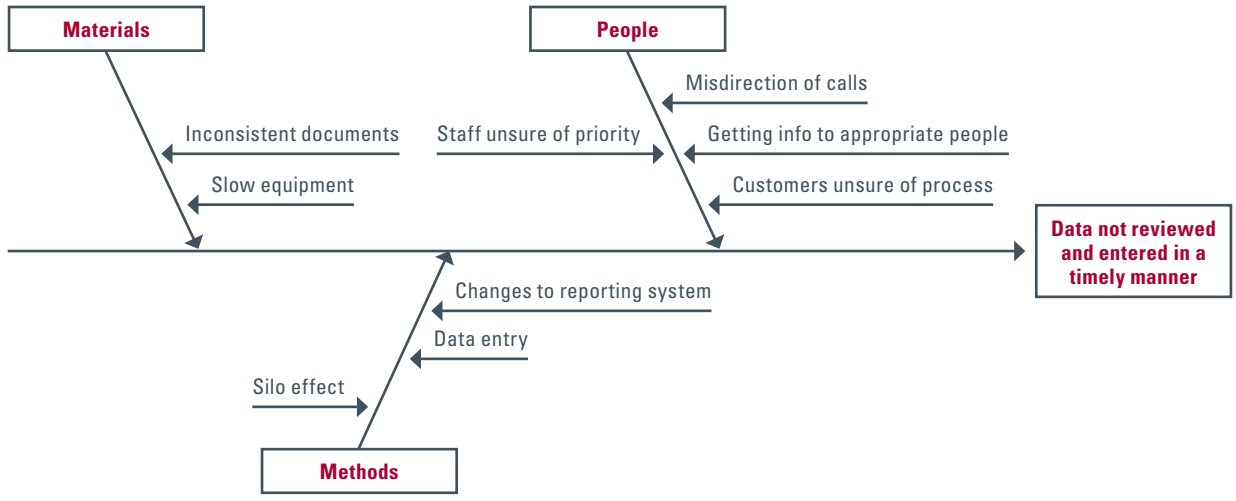

Figure 3: Fishbone Diagram (Cause and Effect)

"Servicizing" and Sustainability: The Strategic Quality Challenges

By Anton G. Camarota

A recent trend in many businesses has been adding service as a core component of a product offering. This shift, known as "servicizing," moves a company away from a simple product offering and towards a system that blends both service and product. This shift can be visualized as moving from left to right (Figure 1).

Servicizing focuses on the function a product provides as the starting point for a business, rather than focusing on a specific technology or product performance. Such a shift to product function can fundamentally change the company's business model, business processes, and approaches to customer satisfaction. A key strategic objective of making product-service systems more sustainable is to increase the number of services relative to the product provided so that material throughput and concomitant waste production are reduced. Achieving this objective requires an accurate assessment of customer problems and a robust design for product-service systems that includes the organizational capabilities necessary to produce the problem-solving goods and services.

Servicizing has the potential to decrease the negative ecological and social impacts from product offerings by replacing product functions with service functions. Servicizing can lessen ecological impacts by reducing both the amounts of materials needed in manufacturing and the number of products sold, and it can increase revenues by adding high value-added services to a product offering. A servicizing approach can also drive green product design—for recycling, for remanufacturing, and for the use of non-toxic materials.

As part of a sustainability-based strategy, the shift towards inclusion of services poses a series of challenges for quality leaders. Each challenge centers on the relationships the company has with its stakeholders, and how the company adds and extracts value from each stakeholder. In order to meet these challenges, quality leaders need to think about their business strategically. They must understand the product value chain and be able to communicate the ecological, social, and economic impacts of servicizing.

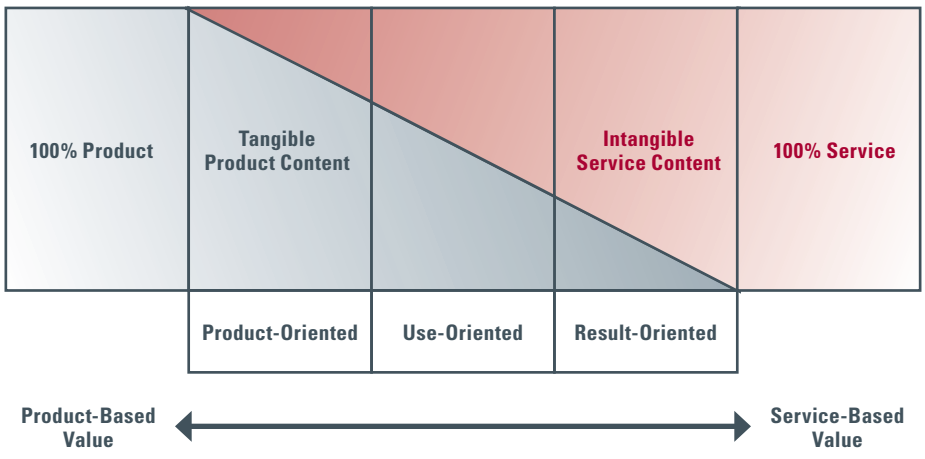

Figure 1: Product-Service System Framework

Challenge #1: Shifting from Product Features to Product Functions

Services can become the basis of a "functional" economy where product-service systems provide solutions to customer problems based on the functions that the systems achieve. The goals of quality leaders in a functional economy are to develop customer-centric problem definitions and design product-service system solutions that solve these problems. Food spoilage is an example of a ubiquitous problem that has been solved by different functional solutions at different times in different cultures. The general solution to this problem is to preserve fresh food so it can be safely eaten later without the negative health impacts from spoilage.

In the past, food was preserved by different methods: drying, salting, curing, canning, pickling, and fermenting. Some houses were built with adjacent "icehouses" where blocks of ice kept food and beverages cold, preserving them for short periods. Today these historical methods of preserving food have been supplanted to a large degree by the function of mechanical refrigeration. Most households and supermarkets own refrigerators, and food is transported over vast distances using refrigerated vehicles.

The customer-centric problem definition for food preservation indicates that people don't really want to own a refrigerator—what they really want is to have fresh food available on a regular basis. Mechanical refrigerators are merely a specific functional solution to this general problem, and it is the effectiveness of a general solution, not the form of a specific functional solution, that is a primary concern for both customers

(Servicizing and Sustainability: The Strategic Quality Challenges, continued on page 12)

(Servicizing and Sustainability: The Strategic Quality Challenges, continued from page 11)

and quality leaders. The point is that multiple functional solutions are possible for solving a single customer problem, and the challenge for quality leaders is to identify functional solutions that solve the problem with the minimum negative ecological, social, and economic impacts.

Challenge #2: Managing Product Life Cycles

While a product life cycle is relatively easy to define, managing the ecological, social, and economic impacts throughout that life cycle is much more difficult. Quality leaders must adopt life cycle thinking and ask, "What are the systemic consequences of product-based actions throughout the supply chain and beyond to ecosystems and society?" A summarized product life cycle map is shown in Figure 2.

A life cycle analysis (LCA) can help to identify ecological and social impacts throughout a product life cycle, but it is the assumptions that are made in interpreting the LCA data for use in decisions that are critical. Moreover, the tradeoffs among different impacts are sometimes difficult to assess. The risk when different impacts are not directly comparable is that the decision process can become more value-based than logic-based. This risk can be mitigated somewhat by a clear understanding of the business model, strategic direction, and company values.

Quality leaders with experience in supplier management can begin to understand the importance of life cycle management. Strategic uses of life cycle management offer some of the biggest sustainability benefits for an organization. For example, Unilever uses life cycle management in their product innovation process to compare existing and new product environmental profiles. The information serves as a guide for product developers and consumers. Unilever creates life cycle assessments based on product categories and uses these assessments to identify greenhouse gas and water footprints, find opportunities for improvement, develop eco-based business strategies, and promote eco-innovation across the organization.

An important aspect of life cycle thinking is to uncover life cycle costs, which are often disconnected from the manufacturing firm in both time and space. Costs can be stated not only in terms of financial currency, but also in terms of ecological and social capital depletion. Benefits can be assessed in much the same way. Life cycle thinking can also uncover interactions with ecological, social, and economic stakeholders, which define how the firm adds and extracts value from each stakeholder.

The life cycle management challenge for quality leaders is fourfold. First, costs and impacts must be quantified to allow for meaningful comparison. Second, opportunities for lowering costs across the product life cycle without increasing the direct costs to the company must be identified. Third, quality leaders must interpret and communicate life cycle data so they can become integrated with innovation and continual improvement. Finally, quality leaders must assess each stakeholder interaction to determine how additional value can be added and extracted.

Challenge #3: Building Positive Customer Relationships

Product-service systems move organizations away from mass production of commodity products and toward more customized, relationship-based offerings that can be difficult for competitors to copy. The product-service system centers the organization on the quality of the customer experience. Organizational success is defined primarily in terms of fulfilling the customer need, demand, or function. This form of success is supported by developing the core competencies needed to operate and improve the system.

Each service interaction can be structured as a chance for the company and the customer to create win-win solutions that solve problems, lower costs, and simplify business operations. The customer becomes less likely to change suppliers once positive relationships

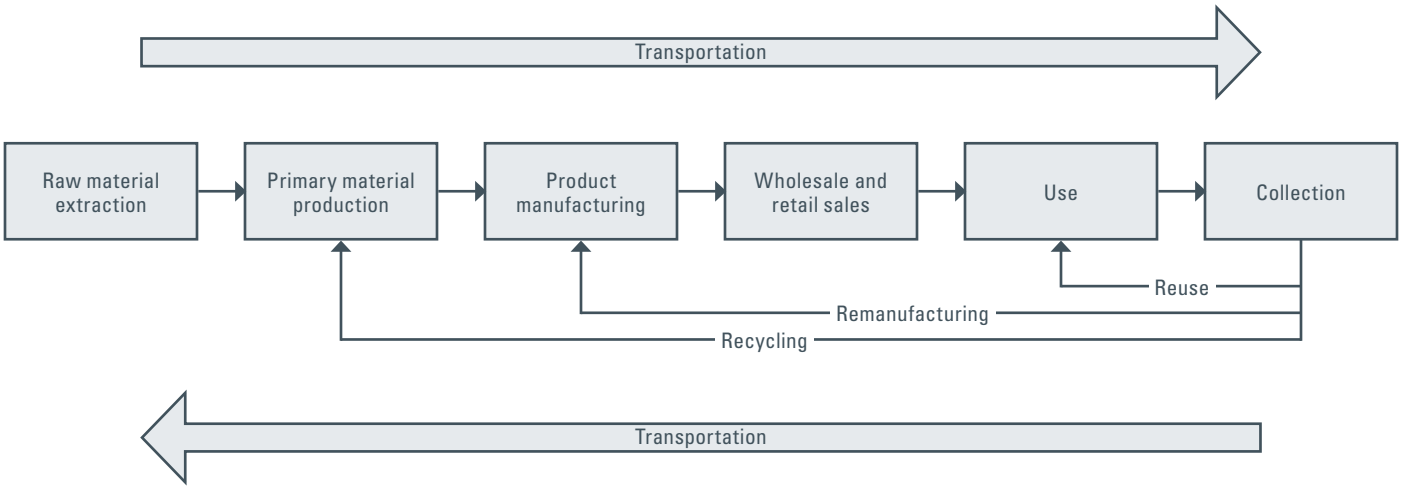

Figure 2: Typical Product Life Cycle

are established and some successes are realized. During each interaction, the company has the opportunity to expand the range of products and services it sells to the customer. Finally, the company can use the new business model to attract new customers who are impressed by the company's commitment to social and ecological responsibility.

The challenge for quality leaders is to identify all of the organizational functions with which the customer comes into contact and to manage these functions for consistent quality. In other words, building positive customer relationships must be a core part of the business strategy. The quality leader should use the information from life cycle assessments to convey the ecological, social, and economic benefits to customers—a difficult communication task.

Making the Transition

Quality leaders must be ready to provide the answers to four tough questions when considering a sustainable product-service system. First, will the customers like it? Second, does the organization have the capability to implement the product-service system? Third, will the product-service system be profitable? Finally, will the product-service system create positive ecological, social, and economic impacts throughout the life cycle? Collecting the information needed to answer these questions involves quantifying the economic, social, and ecological value of the product-service offering. The quality leader will need to develop an inventory of existing and needed organizational competencies and prepare a service blueprint that reflects functional solutions to customer problems.

Quality leaders considering sustainable product-service systems must challenge the long-held assumptions that increasing customer satisfaction and growing revenue mean selling more products. Their task is to replace these assumptions with the beliefs that revenue growth and increased customer satisfaction can occur by including high value-added services to the product offering. In many cases a product-service system represents a fundamental shift in business strategy, and quality leaders will need to make a compelling case for this shift. The message must be that the sustainable product-service system will bring higher value at lower costs for customers and be a strategic fit with the current business model. The message must also address profitability, provision of ecological and social benefits, and creation of a competitive advantage. Quality leaders who are prepared to meet the challenges of servicizing can change the way products are made, used, and disposed of, and can help develop sustainable business models for a sustainable economy.

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Quality Management Journal Announcement

Dear QMD Members:

I would like to announce a new feature that we are preparing to implement in the *Quality Management Journal* (QMJ) to provide added value to our audience. In consultation with Bill Tony at ASQ and leaders of the Quality Management Division, the QMJ will begin publishing featured papers relating to quality management practice. These pieces will be different than the typical QMJ article in that they need not be grounded in research or theory, but nevertheless must make a significant contribution to quality management practice. Examples of appropriate content would be a case study of some implementation or problem solution in QM along with lessons learned, or an insightful survey that provides a unique summary of some contemporary branch of QM knowledge. With each accepted paper, we will solicit a companion commentary from an academic perspective that will help link the work to existing theory and research and perhaps raise follow-up questions to develop new research directions.

I invite you to consider submitting a paper for this feature. Feel free to contact me to discuss any ideas you might have. You can reach me at james.evans@uc.edu.

Sincerely,
James R. Evans, Editor, QMJ

Quality Management Journal Preview

QMJ vol. 17 no. 4 Executive Briefs

As a continuing feature of the QMF, we are showcasing the most recent articles in our sister publication, the *Quality Management Journal* (QMJ). The QMF focuses on the practical application of quality principles, and the QMJ focuses on the research aspect of quality. We hope that you will visit their website and begin the synthesis process of merging theory with application to advance the field of quality. http://www.asq.org/pub/qmj/index.html

The QMJ provides relevant knowledge about quality management practice that is grounded in rigorous research. They seek:

- Empirical articles that provide objective evidence concerning actual quality management practice and its effectiveness.
- Research case studies that consider either a single application or a small number of cases.
- Management theory articles that present significant new insight and demonstrated practice.
- Review articles that create links to the existing academic literature and aid in the development of an identifiable quality management academic literature.

Here are summaries of their most recent articles.

Impact of Quality Management on Hospital Performance: An Empirical Investigation

Robert E. Carter, Subhash C. Lonial, and P. S. Raju, University of Louisville

Understanding the impact of quality management on firm and organizational performance continues to be a concern for managers, since quality procedures have been shown to reduce product costs and positively impact firm performance. Research on the link between quality management practices and organization performance, however, often finds contradictory outcomes—quality procedures may not consistently result in positive outcomes. Thus, additional research is necessary to help researchers and practitioners reconcile these two seemingly contradictory perspectives.

Due to its overall importance to the economy and the fact that quality management practices in the health care field are growing in importance, the authors chose a health care setting for their research. Data for the study were collected using a survey mailed to senior executives at 740 hospitals in a five-state region. The authors observed a 24-percent response rate, yielding a usable sample size of 175 hospitals. The survey included specific questions or items to measure each of the constructs of interest in this analysis, including quality context, quality practices, environmental uncertainty, and others.

Results of the study indicate that managers need to understand and identify the factors that impact firm performance. Also, the quality situation or context under which a hospital operates is important. Thus, to improve hospital performance, the scope of the organization's quality activities needs to be very broad and encompassing.

Medication Discharge Planning Prior to Hospital Discharge

Karen Steffen Mutsch, Northern Kentucky University, and Melisa Herbert, Saint Elizabeth Health Care

Understanding and taking multiple medications can become problematic for patients who have been discharged from the hospital, especially the elderly. It is the responsibility of the nurses to teach patients self-mediation skills that encompass not only obtaining the prescription and monitoring the medication's effectiveness, but also teaching patients why, how, and when to take their medicines. Patients' misunderstanding of prescribed medications can lead to hospital readmission and increased mortality.

This study was conducted to determine whether a written educational resource used by nurses at discharge could improve patient knowledge of cardiovascular mediations. Providing written instructions ensures accurate and consistent information is given to all patients concerning their individualized home medications. The study attempted to answer the following question: "Can a comprehensive verbal and written nursing medication educational intervention in the hospital affect patients' knowledge regarding cardiovascular medication names, dosages, schedules, and purposes prior to hospital discharge?"

At a 650-bed hospital, 50 charts were reviewed pre-intervention and post-intervention for medication reconciliation, and patients were interviewed concerning medication adherence and knowledge. The results of the study

suggest that an advanced planning nursing practice model can be used to increase patient knowledge of medications prior to hospital discharge. Nurses who understand the importance of educating patients about their medications early in the hospital admission lead to increased patient knowledge of medications. Thus, nurses are in the best position to provide medication information prior to discharge and sustain a medication discharge planning program.

Core Values in Hospitals: A Comparative Study

James A. Belohlav, DePaul University, Lori S. Cook, DePaul University, John R. Olson, University of St. Thomas, and David E. Drehmer, DePaul University

Health care spending in the United States has reached record levels, and it is expected to continue to rise. Consequently, health care expenditures have been a cause for concern for both policymakers and the health care industry. Health care organizations are adopting a variety of improvement programs that not only focus on costs, but also on patient safety and clinical outcomes. All hospitals, however, are not able to undertake key activities that will lead to necessary improvements.

The authors conducted a study to examine the impact of a hospital's core values on hospital safety. In addition, it looked at whether there are differences in core values between award-winning hospitals and nonaward-winning hospitals. Findings of the study can be useful for hospital decision makers who are trying to improve their quality of care, patient safety, and organizational process.

Primary data were collected from 108 Minnesota hospitals and 17 quality award winning hospitals. Secondary data were assembled from the Leapfrog database. The initial part of the study used a Rasch model analysis.

The results of this study essentially provide a road map for hospital executives who are trying to increase the performance of their hospitals. The results show that hospitals have widely varying abilities in implementing core values. Further, core values present differing levels of difficulty for the hospitals that are trying to accomplish them. The findings also indicate that the ability to adopt core values is related to overall safety, and a hospital's ability to successfully adopt any particular core value is a function of its existing capabilities.

The Effects of Physicians' Feelings of Empowerment and Service Quality Perceptions on Hospital Recommendations

Robin L. Snipes, Thomas Loughman, and Robert A. Fleck, Columbus State University

Physician turnover in the health care sector is of concern to hospital managers because it can affect the quality of medical care, as well as greatly impact patient loyalty and turnover. Previous studies have shown relationships between employee satisfaction and positive organization outcomes such as increased job performance and lower turnover. Most management researchers today agree that implementing policies to increase employee satisfaction should pay off in the long run.

In this paper, the authors consider the role of physicians' feelings of empowerment and service quality perceptions on their satisfaction with a hospital. The study also aims to provide suggestions for better hospital management and some insight for theory building. The study was conducted in a medium-sized city in the United States; a survey was mailed to 300 physicians who perform medical services for one of the hospitals located within the city. Of the surveys sent out, 94 were completed, resulting in a response rate of 31.3 percent.

The results of the study support the notion that physicians' feelings of empowerment may moderate the effect of service quality perceptions on physician satisfaction. Also, results indicate that the quality of hospital operations contributed more to the likelihood that physicians will recommend a hospital to their peers. This would suggest that improvements made to hospital operations, such as records availability and efficiency in scheduling, would impact physician behaviors more than the perceived quality of the hospital staff.

QMF Book Summary

Living on the Edge of Chaos: Leading Schools Into the Global Age

By Russell T. Westcott

Living on the Edge of Chaos: Leading Schools Into the Global Age, Second Edition, by Karolyn J. Snyder, Michelle Acker-Hocevar, and Kristen M. Snyder. ASQ Quality Press, 2008. 345 pp.

The phrase "Never judge a book by its cover" is attibuted to Cary Grant in the 1947 movie *The Bachelor and the Bobby-Soxer* (Wikipedia). When I acquired this book based on the main title, I didn't pay attention to the subtitle. I'm not in a school system, nor do I consult to schools. Return or read was my choice. However, exploring—then reading—this impressive volume taught me to look beyond the industry or milieu and examine the lessons to be learned and to surmise how they might be applied in my own more familiar territory.

Certainly the perspective of professional educators was enlightening, but more important to me were the insights about preparing for the human challenges in the global community. The authors assert that today's high school graduate will likely encounter the following situations: (1) selling to and buying from the world; (2) being employed by international companies; (3) understanding and managing employees from other cultures and locales; (4) engaging collaboratively with people from all over the world in joint ventures; (5) competing worldwide for jobs and markets; and (6) dealing with worldwide problems such as diseases, poverty and hunger, pollution, global warming, terrorism, crime, and natural disasters. Skill in more than one language and personal flexibility will be essential. The graduate will need the ability to cope with increasing complexity in her/his technological and social environment.

The authors believe that networks are looming as the critical structures for the global age, necessitating competency in networking as a primary leadership skill. Considering a paradigm shift from a hierarchical business model to networks, the authors offer ten ways to prepare. Students need to become competent dreamers/designers who can help fashion the increasingly complex world. Inherent in this view is that the mechanical approach to solving and fixing problems must change to one of continuous development.

The book provides brief tutorials on key philosophies, concepts and methodologies, such as:

- Newtonian physics
- Scientific management
- Bureaucratic management and thinking
- Relativity theory and quantum physics
- Major pioneers and contributors:
  - Mary Parker Follett (psychological and social aspects of the job)
  - Elton Mayo (worker productivity)
  - Chester Barnard (manger's responsibility re: psychosocial, technical, and economic)
  - Kurt Levin (force field analysis)
  - Ludwig von Bertalanffy (general systems theory)
  - Talcott Parsons (social systems)
  - Robert Lilenfeld (adaptation of systems theory to the technological realm)
  - Cleland and King and others (translation of systems theory into the process of management)
  - Peter M. Senge (systems thinking)
  - Edwards Deming, Joseph Juran, and Kaoru Ishikawa (quality management)
- Chaos and complexity theories

"The edge of chaos is where disequilibrium rather than equilibrium is the condition in which natural dynamic systems are most alive, vital, responsive, and creative. Ten guidelines are discussed for altering the course of change within organizations to enable the system to survive and become increasing responsive to changing environment. Number 10 is: *Life is an emergent phenomenon, which thrives at the edge of chaos.*"

Provided you are able to transcend the book's orientation to school systems, unless you're already in the educational sector, there are valuable Big-Q insights and lessons to be learned from this book

President of R.T. Westcott & Associates, Russ Westcott is an ASQ Fellow, CQ, and CMQ/OE. He is editor of the ASQ Certified Manager of Quality/ Organizational Excellence Handbook, *3rd edition and a co-editor of the* ASQ Quality Improvement Handbook. *Russ instructs the ASQ Certified Manager of Quality/Organizational Excellence refresher course nationwide. He writes for* Quality Progress, Quality Digest, Quality Management Forum, *and other publications. Russ can be reached at russwest@snet.net. His mailing address is 263 Main Street, Suite 100, Old Saybrook, CT 06475-2326.*

ASQ

QUALITY MANAGEMENT CONFERENCE

23rd Quality Management Conference

March 17–18, 2011

Jerry Ross
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John Timmerman
VP, Global Guest Experience
and Rooms Operations
Marriott International, Inc.

Mike Micklewright
President, QualityQuest, Inc.

Excellence Through People, Processes, and Performance

Rosen Centre Hotel
Orlando, FL

Pre-conference Courses: March 14–16, 2011
Certification Examinations: March 19, 2011

The 23rd Quality Management Conference "Excellence Through People, Processes, and Performance" will offer many learning opportunities for attendees to participate in a variety of forums—pre-conference courses, presentations, keynote addresses, and interactive sessions. ASQ certification exams will take place on Saturday, March 19th, right after the conference concludes.

Conference Highlights

You will benefit from the expertise of leaders, subject matter experts, practitioners through a variety of presentations that include:

- Keynote speakers
- Pre-conference courses and refresher classes (for ASQ certifications)
- Quality topics and case studies
- Health care, Service and Manufacturing related sessions
- Innovation Showcase
- Exhibitors that include other ASQ Divisions, Quality organizations and services

Networking

Please join your fellow Quality practitioners for a Welcome Reception in the Exhibit Area on Wednesday from 5 PM to 7 PM. The Exhibit Area is a central location that will serve as a focal point throughout the conference. This central networking and exhibit area will be available throughout the 2-day Conference so you can interact with colleagues and discuss quality related products and services with our exhibitors.

Location

The Rosen Centre Hotel is conveniently located in Orlando on world famous International Drive, close to many restaurants, shopping and attractions (such as Sea World and Universal Studios).

For more information on Orlando, please visit our Orlando QMD Conference website at: http://www.asq.orlandomeetinginfo.com.

Pre-Conference Courses

Courses that Begin on Monday

Certified Quality Engineer (CQE) Refresher (CRS 1)

Ahmad Elshennawy, PhD
3-Day (M–T–W)
8 AM to 5 PM

This CQE review course has been developed as a method of honing your knowledge and skills as well as preparing you to take and pass the CQE certification exam. The method of instruction will be to present in class, a detailed coverage of each of the areas in the Body of Knowledge (BOK), followed by a discussion and review of exam type questions. The instructor will make every effort to tailor the instruction so that it relates to the actual exam, as well as how the material is applied to the work place. Each class session will also allow time for the subliminal learning, followed by retention checks to solidify mastery of the CQE BOK.

Course attendees will be provided with a copy of the ASQ CQE Handbook, Third Edition, prior to the course start date. It is recommended that participants read this text before attending the course.

Statistical calculator (single variable, with simple statistical functions). Each calculator should have the following: sample standard deviation, average, combination, permutation, natural log, and square root.

Certified Manager of Quality/Organizational Excellence Refresher (CRS 2)

Russ Westcott—QMF Author
3-Day (M–T–W) 8 AM to 5 PM

This course is designed to help participants become familiar with the breadth of the body of knowledge and identify areas for more in-depth study. During the course, participants will have the opportunity to practice and discuss both multiple-choice and constructed response questions. The new Certified Manager of Quality/Organizational Excellence Handbook 3rd Edition will be provided to all course attendees prior to the course start date. Participants are expected to complete pre-work reading and questions, and do homework the first two nights of the class. It is recommended that participants register by January 25 to allow adequate time for course pre-work.

Six Sigma Green Belt (SSGB) (CRS 3)

Milt Krivokuca—QMF Author
3-Day (M–T–W) 8 AM to 5 PM

This three-day course studies the concepts for the Six Sigma process improvement methodology as a Six Sigma Green Belt. Topics include indentifying improvement projects from a business case perspective, understanding basic statistical applications, applying business metrics for decision making, and using the 5–step Define, Measure, Analyze, Improve, Control (DMAIC). This course is an intensive study of the elements contained in the Six Sigma Green Belt Body of Knowledge and is structured using slide presentations and lecture, along with sample practice test taking. In addition to gaining the knowledge required to pass this exam, an overview of the ASQ test taking process and test taking tips will be provided. A copy of the ASQ Certified Six Sigma Green Belt Handbook will be provided to each participant prior to the course start date, and will be required to pre-read to gain an understanding of how it is structured.

Certified Quality Improvement Associate (CQIA) Refresher (CRS 4)

Mike Ensby
2-Day (M–T) 8 AM to 5 PM

The Certified Quality Improvement Associate (CQIA) refresher is like a mini-Quality 101 course. It is designed for the individual who wants to understand the basics of what goes into developing a proactive quality-based workplace. Starting with an overview of quality terms and moving into the history of the modern quality movement via the teachings of Deming, Juran, and Crosby, attendees will then learn the principles of the continuous improvement methodology. Significant time will be spent introducing the qualitative and quantitative tools of problem solving and where each fits into the continuous improvement process. The course finishes up with discussion of team-based quality, customer satisfaction, and supplier management. This is an excellent course to prepare someone new to the quality field for the Quality Improvement Associate certification exam. Course attendees will be provided a copy of the ASQ Quality Improvement Handbook, Second Edition.

Certified Quality Auditor (CQA) Refresher (CRS 5)

Sandra Storli
2-Day (M–T) 8 AM to 5 PM

The Certified Quality Auditor (CQA) refresher is designed for the professional who conducts various system, process, and product audits, both internally and externally to established industry standards. This interactive course will examine the elements contained in the CQA Body of Knowledge. An emphasis of practical applications of audit practices which support quality improvement systems will be studied. Practice test questions provide the basis for extensive discussion about the elements contained in this Body of Knowledge, along with test taking strategies to assist those who might not have taken structured and timed exams for a while.

A copy of the ASQ Auditing Handbook, Third Edition will be provided to all course attendees.

Courses that Begin on Tuesday

Cost of Quality (CRS 6)

Doug Wood
2-Day (T–W) 8 AM to 5 PM

This course integrates quality costs with continuous improvement to achieve improved financial results. To accomplish this, participants learn a methodology called "Cost of Poor Quality" or "Quality Costs". This methodology has more than 40 years of successful application and has been strongly endorsed and promoted by such leading quality gurus as J. M. Juran and Phil Crosby. Cost of Quality principles, benefits, definitions, and models are presented and discussed. Practical advice on

getting started in setting up a quality cost system is provided as well as proven techniques for collecting and analyzing quality costs. Through a series of interactive exercises and workshops, participants will have the opportunity to estimate various categories of quality costs, organize them in a report to management, identify cost drivers and root causes, perform cost-benefit analyses for improvement projects, and relate improvement activities to organizational goals. The ASQ Cost of Quality book will be provided to all course attendees.

Failure Modes and Effects Analysis (FMEA) (CRS 7)

David Little
2-Day (T–W) 8 AM to 5 PM

This course is designed to provide the student with a working knowledge of the FMEA process as it is applied to product, process, or system. References will be made to ISO 9001, and TS 16949 standards. Failure Modes and Effects Analysis is a critical step in the development of a new product or in the modification of existing products. The purpose of the FMEA is to identify potential modes of failure and their relationship to product design or manufacturing process and their effects, if known, on the end use of the product. Topics: This systematic approach parallels, formalizes and documents the mental disciplines that an engineer normally goes through in any design process. Discussions on FMEA history, methods, types, responsibilities, documentation, implementation and software will be reviewed and presented. Course attendees will be provided with ASQ Course material notebooks in class.

Courses that Begin on Wednesday

Customers Mind: Uncover, Translate and Deliver What Customers Want (CRS 8)

Robin Lawton
1-Day (W) 8 AM to 5 PM

There is broad demand for a simple way to know (1) who "the customer" really includes, (2) what questions to ask, (3) how to prioritize and understand their answers and (4) how to define, deliver and measure success. There is no such thing as the customer. And what they say is often not what they want. Language is inherently ambiguous. This hands-on session describes a refreshingly simple way to use simple "word formulas" to eliminate ambiguity with math-like precision. You will apply this unique methodology to your own work in a team environment, so bring colleagues. The facilitator will give you new tools that equip you to understand what customers want, so you can predictably create satisfaction and excitement.

Lean: Principles 1st, Culture and Practices 2nd, Tools 3rd (CRS 9)

Mike Micklewright
1-Day (W) 8 AM to 5 PM

In many US companies today, the approach to becoming lean is an approach based on the application of tools. A tools only approach will never be sustained and success will never endure. Thomas Jefferson said, "Be flexible in style, but unwavering, like a rock, in Principles." In other words, we should be flexible in the lean styles, or tools, we employ. We should even consider developing our own tools – now that's radical! If we copy anything from Toyota, we should be copying its principles and developing our own styles. But what are the Lean principles and where did they come from? What are your company's principles? Does your culture and business practices support these principles and if not, what do you do about it? What does a lean culture look like and does it look like your culture? All of these questions will be explored and discussed. Then, these same issues should be discussed within your organization if Lean is to be truly given the chance to be sustained. We will discuss now to do this. Each participant is asked to bring his/her documented company principles, values, mission, vision, quality policy, etc. to the class, either on a flash drive or in hard copy form.

Root Cause Analysis and Lean (CRS 10)

Mike Micklewright
1-Day (W) 8 AM to 5 PM

Root Cause Analysis is the most important process of improving any Quality Management System. It is also the most important process in any improvement activity whether it's Lean, Six Sigma, or otherwise. Yet, so few people either know how to do it right or do not wish to find out how to do it right. 1) Learn how to identify waste and why this is an initiator of preventive actions. 2) Learn of the relationship between the Five Whys and levels of different actions. 3) Learn how the Seven Basic Quality Tools can improve the effectiveness of Root Cause Analysis.

Strategic Planning and Execution Using Lean Tools (CRS 11)

Jd Marhevko—QMF Author
1-Day (W) 8 AM to 5 PM

This is a hands-on, high-level, walk through session of how to utilize Lean Six Sigma (LSS) tools at the organizational level. The discussion takes the participants through a DMAIC process where they Define their key objectives via the simplified use of a strategic planning/goal setting matrix. They then identify what their key Measures will be and will draft samples pertinent to their business settings. During this session, participants will review LSS Analysis tools that have been successfully applied across a variety of industry and service sectors. The course then discusses the act of Improvement to enable the achievement of their defined objectives. Lastly, the concept of Control will be reviewed to show participants some methods of how to review and ensure that executed improvements achieve and/or hold the gains that were made.

Complimentary QMD Cafe (CAFÉ)

Heather McCain—QMF Author
Wednesday, March 16th 1 PM to 4 PM

Please join the Quality Management Division (QMD) Leadership team at our annual "Ideas for Improvement Gathering"! It is a World Café style meeting, consisting of stakeholder dialogue that engages participants and QMD Leadership in a discussion around common concerns. It also encourages candid dialogue and creative thinking among participants in an informal and welcoming atmosphere. The process consists of having everyone engage in dialogue at different tables while scribing what emerges on the table top, followed by group sharing, creating meaningful connections and knowledge flows, enriching the collective pool of wisdom around the Café themes. QMD uses this information to improve products and services offered to better serve its members' needs.

Travel & Other Information

Hotel Reservation Information

Rosen Centre Hotel
9840 International Drive
Orlando, Florida 32819
Reservations: 800-204-7234 or 407-996-9840
Fax: 407-996-3169

Please note that there are TWO Rosen Hotels in Orlando—the QMD Conference is at the Rosen Centre NOT Rosen Plaza.

A block of rooms is being held at special conference nightly rate:

- $182 per night, single and/or double occupancy rate plus tax
- $207 per night, triple occupancy rate plus tax
- $232 per night, quad occupancy rate plus tax

Cutoff date for special room rate is February 12, 2011 OR up until the room block is sold out.

Please contact the hotel direct at 1-800-204-7234 for suite upgrade rates, special requests, and other information.

- Concierge Lounge access is an additional $40.00 per day. Please contact the hotel directly to add this upgrade to your reservation.
- Special requests including king beds, connecting rooms, etc. are not guaranteed and granted based on availability on the day of arrival.

You must make your own room reservations with the hotel. Be sure to identify yourself as an attendee of the ASQ-QMD 23rd Quality Management Conference. Call the Rosen Centre Hotel at the above numbers or use their online reservations at https://rhv1web.rosenhotels.com/v1web/rc/Availability.asp?WCI=Groups&WCE=GroupSelect&BookID=42863&GroupPassword=5727.

Accommodations for participants with disabilities must be coordinated with the hotel at the time of reservation.

Self parking on property is $6.00. Valet parking is also available for $12.00 all day or $18.00 overnight.

Car Rental Discounts:

Avis is offering discounts on automobile rentals for conference attendees. To make reservations, please call Olson Travel Service at 800-847-5921 or 262-784-1060; or Avis reservations at 800-331-1600 and refer to ID number D150060.

Airport Transportation Service

Mears Transportation Group is offering discount roundtrip shuttle service to and from the Orlando International Airport. To recieve the discount go to https://secure.mearstransportation.com/Default.asp?referrer=390286056 and click on Shuttle Reservations. Mears also provides taxi and luxury car service that is not included in the discount. Call 407-254-0407 for more information.

Substitution/Cancellations

If you find that you cannot attend the 23rd Quality Management Conference after you have registered, you have two alternatives:

1. Send a Substitute—Substitutions can be made at any time, even on site at the conference.
2. Request for Cancellation—Requests for cancellation received on or before March 4, 2011, will receive a full refund. Requests for cancellation received between March 7 and 11, 2011, will incur a $100 cancellation fee. No refunds will be available after March 11, 2011.

To arrange for a substitute or cancellation, simply call 800-248-1946 or 414-272-8575 or fax to 414-272-1734.

Special Needs

Do you have special needs or dietary restrictions that we can address to make your participation more enjoyable? If so, please email ASQ Customer Care at the help@asq.org.

Satisfaction Guaranteed

Your satisfaction is our goal. If you are not completely satisfied with the content of the 23rd Quality Management Conference, we will gladly apply your conference fees to the 24th Quality Management Conference. Requests must be received by March 25, 2011. Your feedback is valuable and essential to continuous improvement of ASQ and QMD's conferences and educational programs. If you have any questions or concerns, please call ASQ at 800-248-1946 or 414-272-8575 and ask for the Events Department.

Event Cancellation

ASQ reserves the right to cancel or reschedule any event or course, and to change instructors. Please be advised that neither ASQ nor its Quality Management Division is responsible for any airfare penalties of other travel charges you may incur.

REGISTRATION INFORMATION

Pre-Conference Courses

Continental breakfast, lunch, and break refreshments provided each day.

Three-Day Courses.....$ 900.00 each

Monday 3/14 to Wednesday 3/16

Certified Quality Engineer Refresher (CQE) **CRS 1**
Certified Manager of Quality/Organizational Excellence (CQM/OE) **CRS 2**
Six Sigma Green Belt (SSGB) **CRS 3**

Two-Day Courses.....$ 700.00 each

Monday 3/14 to Tuesday 3/15

Certified Quality Improvement Associate Refresher (CQIA) **CRS 4**
Certified Quality Auditor Refresher (CQA) **CRS 5**

Tuesday 3/15 to Wednesday 3/16

Cost of Quality **CRS 6**
Failure Modes and Effects Analysis (FMEA) **CRS 7**

One-Day Courses.....$ 500.00 each

Wednesday 3/16

Customers Mind: Uncover, Translate and Deliver What Customers Want **CRS 8**
Lean: Principles 1st, Culture and Practices 2nd, Tools 3rd **CRS 9**
Root Cause Analysis and Lean **CRS 10**
Strategic Planning and Execution Using Lean Tools **CRS 11**

Special Sessions..... No Charge

Wednesday 3/16 1:00 to 4:00 p.m.

Quality Management Division Cafe **CAFÉ**

Wednesday, 3/16 5:00 to 7:00 p.m.

Welcome Reception **RECEPT**

Thursday, 3/17 5:00 to 6:00 p.m.

QMD Business Meeting **BUSMTG**

Conference Pricing

Conference Pricing			
Regular	Enterprise and QMD	December 1 to March 9	$ 674.00
Regular	ASQ and Guests	December 1 to March 9	$ 724.00
Group Rates Available—Contact Ellen Quinn for details.			

Group Registration

Groups of three or more will receive $25 off each registration. All registrants must be from the same organization and all registrations must be received at the same time to qualify for this discount. Contact Ellen Quinn for more information at Ellen.Quinn@ngc.com.

Tours

NASA "Behind the Scenes" **(TOU1)** Wednesday, 3/16 8:00 AM
You must pre-register to attend the Tour. **$25 EACH**

Wheeled Coach **(TOU2)** Wednesday, 3/16 1:00 PM
You must pre-register to attend the Tour. **$25 EACH**

Payment Information

Advance registration must be accompanied by payment in full (U.S. currency) for all desired activities. Purchase orders will be accepted if sent with your completed registration form. All phone registrations or faxes must include the number of a major credit card that will be charged for registration fees (MC/Visa/AMEX accepted). Do not follow up phone or fax registrations with mail-in registration. Registrations (whether phoned, faxed, or mailed) will be confirmed by mail with a receipt and confirmation letter.

Two Easy Ways to Register

1. **Call** ASQ at 800-248-1946 or 414-272-8575 and use your MC, VISA, or AMEX. To speed your registration process we recommend that you fill out the registration form and provide the priority code located above your name on the mail panel of this brochure.
2. **Online** registrations can be made at: http://asq.org/conferences/quality-management/index.html.

Certification Exams

Saturday, March 19, 2011
Exams begin at 8:00 AM

- Certified Manager of Quality/Organizational Excellence
- Certified Quality Auditor
- Certified Quality Engineer
- Certified Quality Improvement Associate
- Certified Quality Process Analyst
- Certified Quality Software Engineer
- Certified Six Sigma Green Belt

The application deadline is February 4, 2011.
Apply today at https://secure.asq.org/certification/qmd-conf-2011-application.html.

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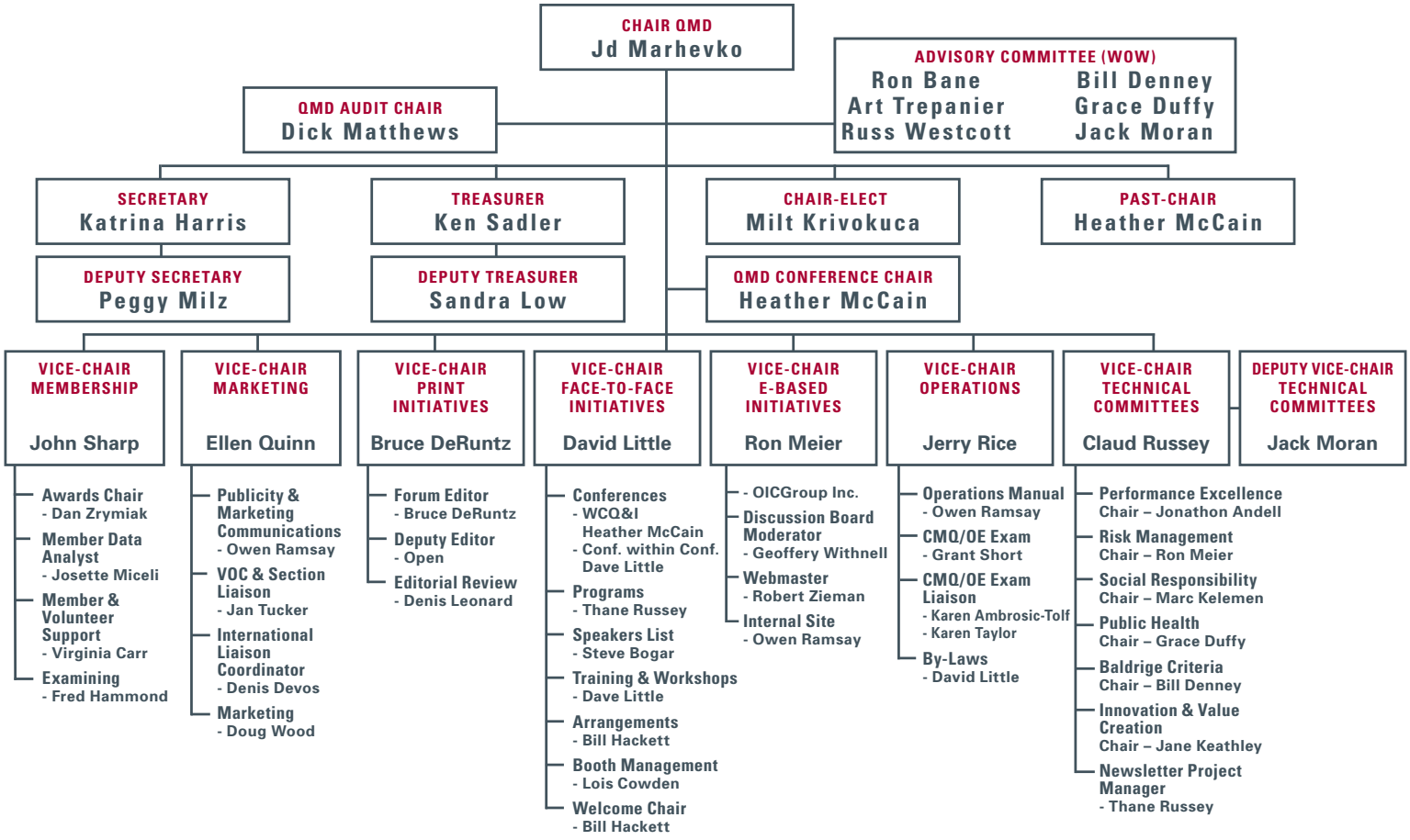

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To see a QMD organization chart and complete roster of QMD officers, committee chairs, and volunteers, go to the QMD Organization pages on the QMD Web site at **www.asq-qmd.org**.

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FORUM

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Address all communications regarding *The Quality Management Forum*, including article submissions, to:

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Address all communications regarding QMD membership including change of address to:

American Society for Quality
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1-800-248-1946 or (414) 272-8575

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Contact the ASQ Customer Service Center at 1-800-248-1946 or (414) 272-8575 to replace issues lost or damaged in the mail.

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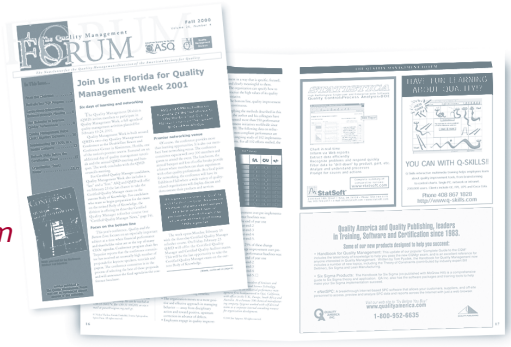

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