



Quality Connection

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*Support your local Section this year.
Attend monthly Section meetings..*

From The Chair

Scott Fairchild

Have you visited our national web site www.asq.org lately or received your September issue of Quality Progress or even looked at the Newsletter header? Did you notice the new logo? It's our new branding effort. ASQ national is planning a public relations (PR) push focused on major news outlets and multiple media types in our local communities, across the country and around the world. The PR initiative is planned to reference the web site, and begin to "tip our hand" as to the renewed ASQ brand, symbolized in the logo. The cleaner, more contemporary design is intended to symbolized ASQ's new strategy and direction. As soon as the "ASQ Brand Identity, Usage and Style Guide" is released to our local section we will begin incorporating our new logo into our newsletters and meeting notices.

Another effort to show what the American Society for Quality is all about is the Community Good Works program (CGW). It is an initiative that demonstrates how the employment of quality tools and processes benefits humanity. Through the use of matching grants and knowledge transfer, the program seeks to improve how local, non-profit organizations serve their communities. In fact, the Baltimore Section may have an

opportunity to participate in the Community Good Works Program with The Chimes organization. The Chimes organization has already submitted a proposal to ASQ's CGW program to develop a performance measurement system. If the project gets selected, the Chimes organization will be asking for "Quality" volunteers in the Baltimore area. If anybody is interested in volunteering, please contact me, your section Chair – **Scott Fairchild**.

Breakfast for Quality Champions

A small-but-powerful band of Quality minded people gathered together on the dawn of Isabel's arrival for the first of the Breakfast for Champions series. Coffee, tea, juice, bagels, a platter of danish and a huge bowl of fresh strawberries, raspberries and blackberries made easy listening to **Dr. Rick Brocato's** session; "**Performance Coaching: Assessing Needs Proactively**". Any concerns as to timing of our meeting on the morning of Isabel's scheduled arrival were quickly dispelled when we realized that the last place to close and the safest place to be was probably right where we were - the Maryland State Highway Administration bldg.

It quickly became evident that Dr. Rick had no intention of spoon feeding us information but rather intended for this to be a early morning wake-up call for our
(Continued on Page 2)

brains! Group discussion, brainstorming and humor were the order of the day as Dr. Rick slowly brought us to the realization that in order for us to accurately assess our people's training needs - we needed to first assess our own. (What an ego-deflator! How easy it is to spot another's deficiency - how difficult to assess my own!) We were then led through a self-exam checklist and a resource list for Training Needs Assessment was distributed.

Some points made in the working session by the participants were:

- You can assess others most effectively by first assessing yourself.
- Common confusion in the workplace about assessments - if you meet the assessment standard, there is the (misperception) that you are being graded - that to meet the standard (good) is equivalent to a "C" grade (average) - and no one wants to be average!!!
- That even more damage is created to compiling accurate assessments by linking pay increases to need assessment results. (Further reinforcing the false assumption that to meet a standard is average or "C" level performance.)
- The immediate vs. the important. Thorough needs assessment and effective personnel development takes TIME. Something we don't have - so we tend to train for the immediate situation, and not the long term or important needs....

Next Breakfast Series dates:

Thursday, October 23rd - "**Software Quality - The Big Problem that Process Improvement Hasn't Solved**" - **Dr. Mark Blackburn** - Maritime Institute

Thursday, Nov 20th **Lean Manufacturing** -VulcanHart
Overcoming Resistance to Employee Involvement
by Peter Grazier

It seems that this topic just never goes away. I have just returned from New Orleans where I conducted a seminar on overcoming resistance to employee involvement (EI), and was once again surprised (and dismayed) that we are still struggling with moving it forward in our organizations.

Most of the attendees had some role in spreading employee involvement within their organizations, and most were frustrated to say the least. What is it about our workplace today that seems to resist movement to a concept that has proven itself over and over?

As I have working with organizations over the years to create participative work environments, this question has been central to my successes and failures. **If one can understand the dynamics of change, both personal and organizational, the probability of success will be greatly enhanced.**

What I have learned is that there are **three basic elements in creating successful change:**

- **The desire to change**
- **The ability to change**
- **The permission to change (for those in organizations)**

1. The Desire to Change

Most humans will not change their beliefs, habits, or behaviors unless they are motivated to do so. Most will not change, even if change is for the better, unless there is some compelling reason. As long as the perceived rewards of staying as we are remain greater than the rewards of changing, we will likely stay as we are. Or, conversely, as long as the perceived risks of changing are greater than the risks for staying the same, we will be unlikely to change.

I was recently given a cartoon which, to me, symbolizes this concept perfectly in terms of today's changing workplace.

"I trusted him more when he had a whip!"

The supervisor or, symbolically, the slave master, is attempting to change (humanize) his management style with his "Slave of the Month" program. Meanwhile, one slave says to the other, "I trusted him more when he had a whip!"

Not only does the slave master have difficulty changing, but the slaves are also feeling some discomfort, even when the change is beneficial to them! Our desire to hold on to things that are familiar and, hence, comfortable is strong.

Of the three elements required for change, my bias is that desire is most important. Little happens if there is no real motivation to change. And strong motivation frequently makes up for shortcomings in the other two. A central question, then, is **how do we create this desire to change?**

Awareness

First we must create awareness of the need to change. What are the compelling reasons to move away from the familiar and comfortable and move to something different and perhaps uncomfortable?

In today's competitive world economy, more and more people are becoming aware of the need for improving the way or organizations work. However, if we really want to turn up the heat on change, we must discuss internally the specific challenges facing our organization.

Who is our competition? What are they doing? What new products and services are they adding? Is the market for our product or service expanding or contracting? What are our costs and revenues per employee versus our competition's? Will our products be subject to new environmental controls? What will rapidly expanding telecommunications technology mean to us and our existing work processes? Can we reduce our overhead expenses to match those considered best in our industry? Could we really become "paperless?" How could we reduce our basic work process by 10 steps this month? How could we improve turnaround time by 90%?

It is my opinion that the more profitable an organization is, the more creative it must be in creating the appropriate challenge. One organization I worked with wanted to increase the rate of implementation of employee involvement, which for several years had been painfully slow. The company was old, well established in its market, and experiencing continued earnings growth. What, I asked myself, would provide some motivation for these people to move forward?

By chance, I came across an article discussing one of their strongest competitors. The article related performance data of the competitor showing, for example, that its revenues per employee were twice that of my client! I shared this information with the management team and they were shocked by the numbers. They could now see the potential threat posed by a competitor with such strong financial performance.

In this case, the risk of inaction became a greater motivator than the discomfort of changing to a participative style of management.

Strategies to Develop Awareness

From a practical point of view, how can this type of information and resulting dialogue be generated? Develop a proactive organization newsletter that discusses issues relevant to its future. Initiate management dialogue sessions with other managers, supervisors, and employees. Conduct **training sessions** that deal with the need to change.

Use case studies that demonstrate what happens when organizations don't respond to changes in their

industry or environment: GM, Sears, IBM, Xerox (early 80's), and others. Conduct book study sessions at the work group level using, for example, books that show compelling reasons for change.¹

Ask people (perhaps in a small group format) "What would happen if we don't change?"

Bring in examples of competitor's products and discuss the implications.

Put up a master bulletin board in a central area and invite employees to post articles on the industry, competitors, challenges, and so forth.

Conduct a Future Search Conference to seriously discuss the future of the organization.

Encourage senior managers to "wander" frequently throughout the organization asking appropriate questions regarding the need to change.

Change reward systems to align with those behaviors the organization wants to expand. For example, performance evaluations should reward a participative style for leaders at all levels and active involvement in organization improvement for all employees.

Again, the purpose of these strategies is to create some discomfort or dissatisfaction with the status quo-- *a realization that to stay as we are is more of a threat than to move forward with new concepts.*

The above strategies make one major assumption, however, and that is that management is not already destroying employee motivation and allegiance with destructive dictates and mandates. For example, those organizations prone to laying off employees at the first sign of financial weakness will find it difficult, if not impossible, to implement and sustain any form of participative management. A layoff as a first alternative to cost reduction contradicts the notion of participative management. Employees will find it hard to commit fully to the organization and its mission, goals, and ideals.

The Ability to Change

If the motivation for change exists, then people will need some assistance developing the skills to change. Ignorant of the dynamics of human behavior, we assume that once people understand the need for change, they will miraculously move in that direction.

However, what holds us back is our ingrained beliefs and resulting behaviors. For example, I may want to become a participative manager but all my previous training has conditioned me to be controlling

and directive and, clearly, the decision maker. And down deep inside, I might really have doubts about this employee involvement stuff. To change my beliefs and ultimately my behaviors significantly, I will need some help.

Strategies to Develop Ability

Get on mail lists for other organizations providing support services dealing with change in today's workplace.

Define a clear vision of the new work environment. In specific terms, what does employee involvement, empowerment, and self-direction mean in our organization?

Example: Employee Involvement Vision

- All employees engaged daily in improving work processes and solving problems
- 50 ideas per year per employee for improving the work and the workplace
- Managers and supervisors encouraging and supporting new ideas on a daily basis
- Work teams meeting on a weekly basis to expand and enhance process improvement innovations

Example: Empowerment and Self-Direction Vision (partial list for example only)

- Supervisor trains group members, delegates daily work group skills, and focuses on longer/wider-range value-added work
- The work group sets and measures its own standards of performance
- The work group determines its own training needs
- The work group deals with its customers
- The work group sets and monitors its own budget
- The work group operates without daily direct supervision
- Peer evaluations are used to improve individual performance
- The work group interviews and selects/ hires new group members
- The vision serves as a clear picture of what the organization will look like in the future.

Attend training on the new skills required by managers, supervisors, and front-line employees.

Publicize "success" stories as they occur in the organization. This helps people see what the organization wants of them.

Attend specialty seminars, conferences, symposiums, and so forth that discuss the new work concepts.

Visit other organizations that are further along in the process and learn from them.

Invite guest speakers in from other organizations to relate what they have learned about change and the new work concepts.

Contact video services and search for videos that discuss or model involvement, empowerment, team, and quality concepts.

Conduct structured dialogues where managers, supervisors, union representatives, or employees can discuss safely their fears and concerns with the new concepts. Why might they hold back? ...and what has to happen for them to move forward? Small group formats work best.

Strive to simplify the entire improvement (quality) process. A bureaucratic process will cave in under its own weight.

Conduct a management session on understanding the organization's beliefs. Do the beliefs support the changes necessary for progress, or will they hold the organization in its current system?

Because our prior training and conditioning is such a significant barrier to our ability to change, we need to take some very proactive steps (such as the strategies listed above). Our learned behavior is like a spring that pulls us back to a comfortable position whenever we stretch a little too far. Breaking free of that spring is difficult, but possible, if we take conscious actions that eventually replace the old behaviors with new ones.

3. The *Permission* to Change

Finally there is the issue of permission. When a change is personal, we only have to give ourselves permission to change. But when the change is in an organizational context, permission must be granted by those in power.

I may have the desire to change, and I may have the knowledge and ability to change. But if I work in an environment that doesn't enable me to change, very little will happen. Desire and ability are there, but permission is not.

I am told frequently by seminar participants that they are constrained by those above them and they don't know what to do. Here are some suggestions:

Thinking Like a New ASQ Certified Quality Manager

By Duke Okes

Introduction

In 2000 a revised body of knowledge (BOK) for the ASQ Certified Quality Manager (CQMgr) exam was released, with the first administered to the new BOK in March 2001. This paper intends to provide the reader with a summary of how the BOK has changed, as well as some ideas on how one can improve the probability of passing the exam. It is a brief summary of a more complete verbal presentation of the same topics.

Disclaimer: Although the writer is an active member of ASQ’s Quality Management Division (QMD), he has no involvement in developing/administering/grading the CQMgr exam. ASQ takes great pains to ensure separation between the personnel involved in the exam and those who provide information (e.g., books, refresher courses) intended to prepare people for the exam.

Overview of the Exam

The CQMgr exam is conducted in one 4-hour session beginning with 45 minutes allocated to two constructed response (essay) questions, and the remainder used to answer 150 multiple choice questions. The constructed response portion is closed book, and exam takers were recently provided with three questions from which they could choose. Constructed response questions require a

handwritten response to the situation provided in no more than one page.

The multiple-choice portion of the exam is open book, with any generally available public reference material allowed as long as it does not contain example questions & answers. Pass rate of the CQMgr exam is similar to most other ASQ certification exams. For more on the design of the exam, required qualifications to take it, the detailed BOK, example questions, and a list of references see the ASQ website link listed at the end of this paper.

The BOK

The core BOK on which the exam is based was restructured for the 2001 exam. Following are the seven major content areas in which exam candidates are expected to be knowledgeable:

- Leadership
- Strategy Development and Deployment
- Quality Management Tools
- Customer-Focused Organizations
- Supplier Performance
- Management
- Training and Development

One can see some distinct parallels between the new BOK and the Baldrige criteria. However, the changes between the first BOK and the new one are more than structural. Figure 1 roughly demonstrates the reallocation of emphasis of topics.

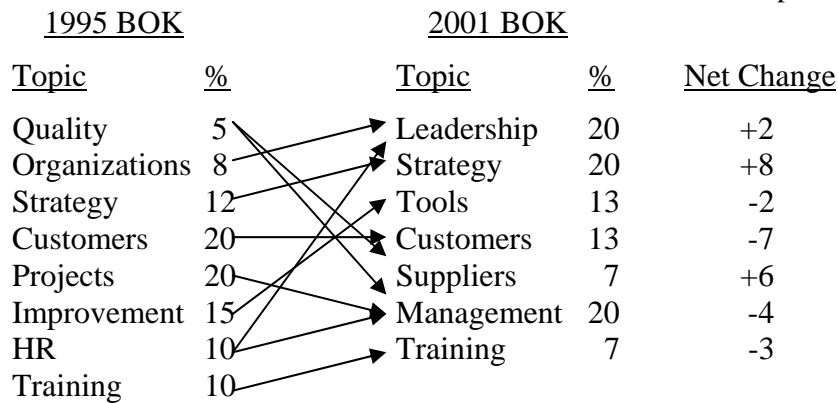


Figure 1 – Map of 1995 versus 2001 BOK

These changes might be interpreted as moving the exam from a focus on internal quality projects to a more strategic view of improvement, and one involving the entire supply chain. In addition, although it cannot be seen at the macro level, some significant topics added to the new BOK include Information Systems, Knowledge Management, Theory of Constraints, and Tools for Innovation and Creativity.

In addition the BOK is now defined at a greater level of detail than before, providing more insight into what each topic area is meant to cover. For example, Strategy Development and Deployment is broken down into three areas:

- Environmental Analysis
- Strategic Planning and Assessment
- Deployment

Environmental Analysis then consists of:

- Legal and Regulatory Factors
- Market Forces, Industry Trends, Competitive Analysis
- Stakeholder Groups
- Technology Trends and Internal Capabilities
- SWOT Analysis
- Customer/Employee Surveys and Feedback
- Internal Capability Analysis

SWOT Analysis is then further defined as “How to identify and prioritize; how to deploy appropriate action in response.”

This increased level of information then allows exam participants to better understand the content to be covered in the exam. However, the exam, as with quality management, is not just about content – process is also emphasized, and is especially tested by the constructed response questions, which are based on an integrated BOK. Following are the major elements, each of which has three-to-eight sub-elements further defined in the BOK:

Contribute to the Strategic Planning and Deployment Process

Develop and Maintain a Customer Focus

Management the Quality Organization/Department

Assess Performance Information

Develop Systems for Managing Supplier Performance

Bloom’s Taxonomy

One of the more significant changes in the exam is not the BOK itself, but the level to which the BOK is tested. How well an individual knows a topic can be tested using questions written at different levels of understanding, and Bloom’s taxonomy is the model now used for this purpose in several ASQ certification exams.

Bloom (1956) proposed six levels of educational cognitive objectives, which could be summarized as:

Knowledge: Recall of basic facts of the subject

Comprehension: Familiarity with basic models used in the subject

Application: Able to use the knowledge in a common situation

Analysis: Can break down subject into component parts and clarify how they are interrelated

Synthesis: Combining various components of the topic in a new way or with other subjects in order to address a unique situation

Evaluation: The ability to determine whether a particular application of the knowledge is appropriate based on defined criteria

Following are two questions on the same topic, with the first written at the Knowledge level and the second at the Application level.

1. A typical component of the strategic planning process is a SWOT analysis. SWOT stands for:

- Strategic weaknesses or threats
- Summarization, weightings, options, tactics

Strengths, weaknesses, opportunities, threats

Suppliers working our territory

2. An organization has identified its strengths and weaknesses and the opportunities and threats it faces. The next steps it should take include all except:

Determine which of the findings are more important

Determine which of the strengths and weaknesses might also apply to competitors, or how they might be different

Allocate sufficient capital and operating funds to pursue the opportunities identified

Develop contingency plans for threats that cannot be addressed directly

The significant differences in the level of understanding are obvious, so someone preparing for the exam must not only understand the BOK, but must do so at the level at which each component can be tested.

A Perspective Shift

Having the proper mindset when taking the CQMgr exam is also likely to impact how one will do on the exam. Following are a couple of major issues one might consider:

The focus of the exam is quality management, not quality assurance. Additionally, it is focused more on a total quality management (TQM) perspective of quality management than the narrower view of the ISO 9000 standards. Given that many

quality managers spend much of their time involved in the day-to-day operation of the quality function (e.g., quality engineering, quality control, quality assurance), they may need to step back and think about quality from a more strategic, cross-functional perspective. Thinking of oneself as a director of quality responsible for multiple facilities may be helpful (Okes, 1998, Okes & Westcott, 2001).

Think about the theoretical answer to a question (e.g., what would the ASQ view be?), then adapt it to the question provided. A potential danger is to use past personal experiences (e.g., the way your company does it) as a guide. Although what a particular firm does may be very appropriate for its own culture, the same practice may or may not be aligned with what would be deemed the “correct” answer on the exam.

Value of the CQMgr

Some people ask why they should even consider becoming certified as a quality manager. They may already hold a title of quality manager (or even director or VP), and may have many years of experience. Following are just a few ways that CQMgr certification adds value for professionals, the profession, and society.

Let’s be honest ... most people work because they need to. So money, although perhaps not the most critical variable in one’s decision about a job, is still a factor. The ASQ Salary Survey can then be of help (see Table 1), indicating an average of \$9k difference in salaries of quality managers with versus without CQMgr certification.

<u>Survey Year</u>	<u>Average Salary Without CQMgr</u>	<u>Average Salary With CQMgr</u>	<u>Value of CQMgr</u>
1996	\$55k	\$63k	\$ 8k
1997	\$56k	\$64k	\$ 8k
1998	\$58k	\$69k	\$11k
1999	\$60k	\$67k	\$ 7k
2000	\$61k	\$70k	\$ 9k

Table 1 – Value of CQMgr

Another value can be identified through the use of Maslow's hierarchy of needs, where self-validation and peer recognition can contribute to a sense of self that is more closely self-actualizing. Passing the CQMgr exam is no small task. It indicates that one has an understanding of a very broad body of knowledge.

The CQMgr certification also plays a technology transfer role, helping to disseminate a common perspective of quality management throughout the profession, which will hopefully then carry through into society.

Summary

The ASQ CQMgr exam reflects current practice in the field of quality management. Quality professionals can benefit through preparation for the exam, as well as holding the certification itself. However, the exam covers more than the language of quality management, and personnel desiring to sit for the exam would do well to understand the breadth and depth of knowledge required.

References

ASQ website for CQMgr information: <http://www.asq.org/cert/types/cqm/requirements.html>

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Author's Bio

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31st Annual Delaware Quality Conference March 4th and 5th, 2004

Call for Papers

Co-Sponsors: Delaware Section, ASQ;
University of Delaware

The Reality Continues is the theme of this year's conference. We will focus on the fact that over the years we have all been involved in various efforts to provide or obtain quintessential quality.

We have "done" Baldrige, State Awards, Benchmarking, Certification, Continuous Improvement, Cost of Quality, Deming, Design of Experiments, ISO 9000, ISO13485, ISO14000, Lean Manufacturing, Process Management, Process Mapping, Project Management, People Management, QFD, Six Sigma, Supply Chain Management, SPC, Theory of Constraints, TQM, and the list goes on and on.

- ✓ What have you learned?
- ✓ Where have you been successful?
- ✓ Where have you been humbled?

The Delaware Quality Conference is THE place to share your experiences with your peers. Have you always been looking for an opportunity to "present" a paper or a workshop? Share a success story? Hone your presentation skills? If the answer to the above is an emphatic YES, please obtain a copy of the CALL FOR PAPERS application at the www.asqdelaware.org website, and submit it on line. We would like to have all applications by December 1 so our committee can meet their schedule.

This conference applies to everyone who is concerned about providing and receiving quality goods and services, regardless of whether it is internal to your company, in your community, or involving the paying customer.

Questions? Please contact Ron Makar, 31st Annual Quality Conference Chair, at rjmakar@aol.com.

I could do nothing and wait for my organization to get serious about improvement and involvement concepts.

I could learn more about the new workplace concepts and begin to discuss them with others, particularly those above me.

I could lobby my bosses to take seriously these concepts of involvement and improvement to secure a future for our organization.

I could invite my bosses to a seminar, Section meeting, conference, or other session.

I could ask for permission to experiment with the concepts.

I could buy my bosses copies of the book *Walk the Talk*. (Depending on my comfort level with this idea, I may want to give them anonymously.)

I could send articles regarding our industry and its competition to my bosses, to entice them to look further into change.

I could secretly put my bosses on the mail lists of organizations advocating change.

I could begin making changes (without permission) within the confines of my workspace and see what happens. A front-line supervisor that wants to experiment with team and improvement concepts might begin by quietly involving his or her people in improving their work processes. Documenting any improvements would then validate the concepts. (Makes use of the important principle: It is easier to ask for forgiveness than permission.)

I could send a letter to the CEO encouraging senior management to look seriously at improvement and involvement concepts. (Requires a high level of confidence and risk taking.)

I could ask to make a presentation to the senior management team and attempt to influence their thinking about the new workplace concepts. (Also requires a high level of confidence and risk taking.)

I could assemble a group of others in the organization who also feel strongly about the need to improve our work and operate within this group to promote change.

The point of this list is to show that if you work in an organization that does not yet support the new workplace concepts, all is not lost. There is probably something on this list that would fit your personal comfort level. Too many of us throw up our hands and

say "What can I do?" rather than "Here's what I can do."

The question of permission is a very personal one that we must answer for ourselves.

In this article I have tried to address the ongoing concern of how to overcome resistance to employee involvement, empowerment, self-direction, and improvement concepts. This is an issue we all struggle with, and I wish there were a simple answer. What I have learned is that no one strategy will work for everyone. The reasons we resist change are very personal and unique, so to change the thinking of many people in an organization will probably require a variety of approaches.

*This article was used by permission of **Peter Grazier** of TeambuildingInc. He can be reached through www.Teambuildinginc.com*

**Six Sigma at W.R. Grace & Co:
Davison Saves Over \$100 Million Using Six Sigma**
By Eric Wichard

Attendees of the Section's Sept. 16 dinner meeting received an overview of Six Sigma as implemented worldwide by specialty chemicals manufacturer W.R. Grace & Co. (locally of Columbia & Baltimore, MD). **Bill Rodebaugh** (Director / Master Black Belt) and **Eric Whichard** (Project Manager / Black Belt) both of Grace's Davison business unit, described the effort initiated in 1999 by CEO **Paul Norris** to help drive aggressive, focused growth and continuous improvement.

The term Six Sigma refers statistically to a very high level of quality or process capability -- a very low level of defects per million opportunities (DPMO). A process operating at a 6-sigma level of capability produces no more than about 3 DPMO (99.9997% good), even though it may drift +/- 1.5 standard deviations. This allowance for natural drift is one of the things that distinguishes Six Sigma.

The Six Sigma approach began at Motorola in the '80's, was further developed and proved at AlliedSignal (now Honeywell) and General Electric, and is now used by many manufacturing and non-manufacturing concerns worldwide. Snee and Hoerl review Six Sigma and its implementation at several companies, including Grace, in their recently published book "*Leading Six Sigma: A Step-by-Step Guide Based on Experience with GE and Other Six Sigma Companies*" (Financial Times Prentice Hall, Nov. 2002), available via Quality Press.

Grace is a medium sized company with about \$1.8 billion in sales and over 6,000 people at work in over 40 countries. Davison represents about half of the Grace business, making catalysts for the oil refining and plastics industries, other catalysts, and silica-based materials for industrial and consumer products.

At Grace, Six Sigma drives business performance improvement by driving process performance improvement, including not only manufacturing processes, but measurement, marketing, R&D, sales, tech service, and business processes as well. Grace is currently extending the application of Six Sigma into maintenance and reliability functions, and adding facets of Lean Manufacturing (eg. value chain analysis).

From the beginning of 2000 to date, the Davison business unit has saved over \$100 million due to Six Sigma. Process improvement is initially estimated and later quantified in dollar terms as direct earnings-related value (revenue increase, cost reduction), and/or more indirect cash flow, cost or capital avoidance value.

Implementation began in third quarter 1999 with Champion (project sponsor) training. In 2000 two "waves" (about 20 people each) of Black Belts were trained, plus two waves of Green Belts. Black Belts receive 4 weeks of training, manage multiple projects, and are full time Six Sigma personnel. Green Belts receive 2 weeks of training and manage one project at a time in their work area with Black Belt support while continuing their regular duties. Many Six Sigma projects were begun and completed in 2000.

In 2001 and 2002 additional training was rolled out including specialized Green Belt (Sales/Tech Service, Measurement), Design for Six Sigma (DFSS - for R&D), and one-day awareness & familiarity level Yellow Belt. As more Green Belts did projects, and the effort as a whole matured, annual savings increased. Key parts of that maturity included project selection and management systems. By the end of 2003, Davison will have about 1000 people, two thirds of our professionals, trained and engaged in an active Six Sigma role.

Many tools and techniques are being used including - Process mapping and flowcharting - Cause and Effects (C&E) analysis - Failure Modes and Effects analysis (FMEA) - Basic and advanced data analysis techniques including plots, control charts, process capability, analysis of variance (ANOVA), design of experiments (DOE), response surface - Measurement systems analysis (MSA, R&R)

These techniques and others allow project teams to identify key process output variables (KPOVs), and key process input variables (KPIVs); then identify the most important KPIVs among many; and finally to optimize those KPIVs to improve process performance.

The full presentation will be made available on the section web site at www.asqbaltimore.org. The presenters may be contacted via Bill.Rodebaugh@Grace.com or Eric.Whichard@Grace.com.

*Six Sigma @ W.R. Grace
Attendee's Perspective of the Meeting on Sept. 16*

By Lauren Fagen

Perhaps many of us, including myself, have an unfair advantage because of our familiarity with the Six Sigma methodology. However, whether or not you have had exposure to Six Sigma, the overview provided by **Eric Whichard**, Project Manager and Black Belt with Grace Davison, was well-explained, and provided practical illustrations that demystified this *thing* we call "sigma levels." After Eric's brief overview, **Bill Rodebaugh**, Director and Master Black Belt, shared how Six Sigma is being implemented at Grace Davison. Of particular interest to me was to see how Grace is engaging the entire workforce and tailoring the roles of Green Belts and Yellow Belts to meet the needs of the business. For example, Grace is training lab personnel as Analytical Green Belts to ensure their understanding of the methodology and to engage them in identifying improvement opportunities in their areas of expertise. Davison has an aggressive goal of training each salaried employee in Six Sigma by 2008. To date, Davison is 61% of the way toward this goal, as 915 of the total 1500 salaried employees have been trained as Black Belts, Green Belts, Yellow Belts, Champions and Leaders.

How is Six Sigma actually making a difference at Davison? Currently, Davison has approximately 200 projects at various stages of the Six Sigma process. Although it is difficult to choose between cost reduction projects and client satisfaction/service delivery improvements, Davison usually targets cost reduction projects first because of their focus on the bottom line. The biggest challenge for Davison in measuring success is that their products are manufactured in batches based on client-specific specs, which means that they do not manufacture 1,000 of any product. For this reason, Davison uses run rate and yield to measure success.

How does Davison measure the success of their Six Sigma training program? The success of Six

Sigma implementation is measured directly by the number of trainees that begin a second project. In addition, Bill noted the importance of obtaining top-down support to provide 100% buy-in throughout the organization. We all know this is critical, but actually achieving this is often a challenge – one that Davison appears to have tackled.

We have all heard about the difficulties that service companies have in implementing Six Sigma in their organizations because of the difficulty in finding trends when no two transactions are exactly alike. In fact, many of us have lived that challenge. What I found most interesting about this presentation was to learn that manufacturing companies can face similar challenges that can be overcome by finding creative ways to measure success within their organizations.

New Quality Course Offered

If you are interested in gaining a basic understanding of the Quality profession, whether you intend to sit for a certification exam or not, then you will be interested in a new class that the Section is offering this spring.

Basic Quality Principles and Methods (QCO 001) will be offered on Tuesday evenings from Feb. 24 through May 18, 2003 at CCBC-Catonsville Campus. This introductory course covers Basic Principles and Methods for application in the fields of Quality Control and Quality Assurance. The material presented is basic to the field of Quality and is intended for those individuals preparing to take one of the various certification exams or courses.

Topics to be covered through the sessions include:

- Quality Terms, Concepts, Principles, and Tools
- Quality Benefits and Philosophies
- Team Roles, Responsibilities, Formation, and Dynamics
- Continuous Improvement and Other Quality Management Tools
- Customer-Supplier Relationships

The Objectives of this course are:

- Provide an Introduction to the Workings of the Field of Quality
- Explain the Quality Philosophies that have evolved the Benefits of their Application
- Describe the Operation of Teams and the Role the Quality Function as a Team Participant

- Make Participant aware of Tools that have applied and proven to have Quality Benefits
- Demonstrate the Interaction of Quality and a Successful Customer-Supplier Relationship

The course will be taught using the Quality Council of Indiana Primer. This will be supplemented with Lecture and included questions answered by the participants.

A registration form for this and the other Section Spring course offerings will be included in the next newsletter. For further information contact Lloyd Dixon at 410-765-3153 or at lloyd.dixon@ngc.com

Quality Definitions

Appraisal Cost -- What you pay for when you buy a house

Average -- A value of which 98 percent of the people think they're above on any subject

Bar Chart -- Record of alcoholic consumption

Cell Boundaries -- The four corners of a prison room

Engineering Support -- A girdle

Mean -- Nasty

Median -- A fortune teller

Minimum Acceptable Reliability -- It worked at least once

Minor Defects -- Crimes committed by juveniles

Mode -- Pie ala

Sub-Group -- Crew of an underwater sea craft

Rational Sub-Group -- Those that are still coherent after two months underwater

Tolerance Limit -- One day per in-law

Sampling Without Replacement -- Stealing

The Lighter Side of Quality

All too often we look at Quality as a serious profession. We tend to overlook the lighter side of quality. (Yes, quality does have a lighter side.) In an attempt to remedy this, I am making an appeal for any articles, puzzles, or if you are really talented, cartoons, depicting some of the less serious aspects of quality. Use your creative talents and come up with some items for the Newsletter. Any and all submissions may be sent to je.cooper@ngc.com. I will try to use these items in future editions of the *Baltimore Quality Connection*. In advance, I would like to thank you for your thought and potential participation in this effort.

Problem-Solving Success Tip

Jeanne Sawyer, Ph.D.

Use your project management skills. Solving a big problem is a project: you're far more likely to solve it successfully if you treat it like one. That means you'll need to identify tasks, make and adjust assignments, and keep track of what is due when.

Get on the right track immediately by starting a task list as soon as you start working on the problem. Every time you think of something that needs to be done, put it on your task list along with the owner, due date and completion criteria (how you're going to know the task is successfully completed). That way, you won't have to worry about forgetting important details, or waste time constantly reconstructing the list in your mind.

Once the problem is defined, you can lay out a project schedule and estimate the resources you'll need. At the very least, you'll need access to key people who have knowledge of the problem. Some of them may need to be released from other responsibilities to work on your problem-solving team. You may also need money for travel, special equipment, exclusive use of a conference room, etc. Figuring this out in advance and making sure it is allocated will help you run your project smoothly.

In addition to the tasks to analyze and solve the problem itself, you'll also need a communication plan and a contingency plan. The communication plan will identify who needs what information about your problem solving effort, when they need it and how you are going to provide it. The contingency plan identifies the things that could stop you from solving the problem and specifies what you are going to do about it. Add the appropriate tasks to implement your communication and contingency plans to your task list.

HINT: Orient tasks to deliverables. Each task should result in something tangible, which will help you make sure the tasks actually accomplish something.



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Jeanne Sawyer is an author, consultant, trainer and coach who helps her clients solve expensive, chronic problems, such as those that cause operational disruptions and cause customers to take their business elsewhere. These tips are excerpted from her book, *When Stuff Happens: A Practical Guide to Solving Problems Permanently*. Find out about it, and get more free information on problem solving at her web site: www.sawyerpartnership.com.

ASQ - Baltimore Section 0502

THE VISION: *To be the Baltimore Metropolitan Area recognized resource on issues related to Quality.*

OUR MISSION: *To create value for our members and others by providing opportunities for development and resources for managing quality in the community.*

Certification Exam Schedule

Examination	Application Date	Exam Date
CQE/CQA/ CSQE/CQIA/ CCT	October 3, 2003	December 6, 2003
CQT/CRE/CMI/ SSBB/HACCP/ Biomedical/ Quality Mgr.	January 9, 2004	March 6, 2004
CQE/CQA/ CSQE/CQIA/ CCT	April 2, 2004	June 5, 2004
CQT/CRE/CMI/ SSBB/HACCP/ Biomedical/ Quality Mgr.	August 20, 2004	October 16, 2004
CQE/CQA/ CSQE/CQIA/ CCT	October 1, 2004	December 4, 2004

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