Fall 2009 Control of the second secon

Quality Professional of the Year

Turning Reading-Across Dreams into a Strategic System for Growth

Chrysler LLC Hosts 2009 Avvards Banquet at The Walter P. Reuther Museum

Safety 101 – Ensuring the Safety of Your Workers

How the Space Shuttle was compromised by a Horse's Bum

Avoiding the Seven Pitfalls to an Effective Document Control Process



2009-2010 Division Council Roster

Chair HA DAO

Tel: 602-689-7766 e: hdao@ssaandco.com

KUSH SHAH

Tel: 248-830-8525 e: kush.shah@gm.com

Secretary JOHN KATONA

Tel: 248-207-9047 e: John.Katona@Delphi.com

Treasurer (Voting Officer) FRANK BYKAYLO

Tel: 248-867-3048 e: Fbykaylo@rdagroup.com

Immediate Past Chair JOHN CASEY

Tel: 248-797-3246 e: johnandcindycasey@ comcast.net

Publications Chair TERESA PRATT

e: teresalpratt@aol.com

Examining Chair ROD MUNRO Tel: 810-523-7302

e: roderickmunro@att.net

Membership Chair **JAY ZHOU** Tel: 313-337-4169 e: Jzhou@Ford.com

Discussion Board Moderator **BILL MAXSON**

Tel: 260-672-8223 e: WRMaxon3@Verizon net

Internet Liaison/IT TIM HUNTEMAN

Tel: 419-957-7982 e: TCHunteman@ Coopertire.com

Education Chair JIM ODOM

Tel: 330-307-7995 e: Jim@jlodom.com

Arrangements Chair MARY BETH SOLOY Tel: 313-322-7089 e: Msoloy@Ford.com Marketing Chair WALT OLDECK

e: Walter.Oldeck@Delphi.com **Voice of Customer Chair** LIN GAO

Tel: 814-876-0161 e: Walter.Oldeck@Delphi.com

International Chair CHRIS HERMENITT Tel: +81 (90) 2462 4339

e: CHermenitt@gmail.com

Awards Chair JAYNIE VIZE

Tel: 248-371-2413 e: jaynie.vize@iee.lu

Quality Professional Award KUSH SHAH Tel: 248-830-8525

e: kush.shah@gm.com

Quality Leader Award Chair CAROL MALONE Tel: 586-752-9199 e: malonec@macomb.edu

Craig Award Chair LARRY R. SMITH Tel: 313-623-7724

e: lrsmith@peoplepc.com **Koth Award Chair** ALLY HAMOOD

e: Ahamood@sbcglobal.net

Jarvis Award Chair HAROLD BRUBAKER Tel: 989-245-2737 e: HABrubak@att.net

AIAG/Healthcare Quality Liaison ROSE STEINER Tel: 98-860-7332 e: Rsteiner@aiag.org

Speakers/SME Chair **DAN DENLINGER** Tel: 937-474-1162 e: Dan.DEDSystems@

ASQ Headquarters Administrator SHIRL FURGER

SBCGlobal.net

Tel: 800-248-1946, ext. 7231 e: sfurger@asq.org



Published by New Echelon - Direct-Marketing, LLC. and ASQ Automotive Division

Editor-in-Chief: Teresa Pratt

Publication Comittee: Ha Dao, Denis J. Devos, Rob Langdon, James L. Odom, Mike Prusak and Michael A. Shader

Publisher: New Echelon - Direct-Marketing, LLC.

Direct all editorial submissions or advertising information to: Teresa Pratt @ teresalpratt@aol.com

When reordering request document number B0623

NOTE: Please forward all change of address requests to ASQ headquarters at www.asq.org

Automotive Excellence (ISSN) is published by New Echelon - Direct-Marketing, LLC., for ASG Automotive Division. All editorial submissions should be directed to Teresa Pratt, Editor-in-Chief, or New Echelon - Direct-Marketing, LLC., Publisher at 9935 Lyon Drive, Brighton, MI 48114. Advertising inquiries should be directed to teresalpratt@aol.com Copyright © 2009, ASQ Automotive Division. No information may be copied without the express written permission of the Editor-in-Chief, ASQ, Automotive Division. Neither the ASQ, ASQ Automotive Division, nor the Publisher's office is responsible for the accuracy of information in editorial articles or advertising in this publication. Readers should independently evaluate the accuracy of any statements in the editorial or advertising of this publication which are important to them and rely on their own independent evaluation.

www.asq.org/auto

Features

Leadership Ha Dao, ASQ Automotive Division Chair

- 3 Quality Professional of the Year awarded to John Katona Teresa I. Pratt
- **Turning Reading-Across Dreams into a Strategic System** 4 for Growth John J. Casey
- **Chrysler LLC Hosts 2009 Awards Banquet at** 6 The Walter P. Reuther Museum Javnie Vize
- 8 Safety 101 – Ensuring the Safety of Your Workers Michael D. Erbaugh, CHCM, CHMM
- 9 How the Space Shuttle was compromised by a Horse's Bum John J. Casey
- 10 Avoiding the Seven Pitfalls to an Effective **Document Control Process** Teresa L. Pratt
- Inside Back Cover 13 Jim Odom – ASQ Fellow Award

Upcoming Events

Monthly Council Meeting

Wednesday, January 6, 2010 RDA Group Bloomfield Hills, MI

Joint Meeting with ASQ Dayton Section

Wednesday, April 15, 2010 Mandalay Banquet Center, Dayton, OH

8th Annual Quality Symposium

April 26, 2010 (tentative)

Macomb Community College, University Center, Warren, MI

ASQ Auto Annual Meeting

Sunday, May 23, 2010 – 2-4 p.m.

Ford CEO Alan Mulally to speak at 2010 ASQ World Conference in Quality & Improvement, St. Louis, MO

Alan Mulally, president and CEO of Ford Motor Company, will kick off the conference's Opening Session, Monday, May 24 at 8:00 a.m.

See the ASQ Website for Updated Information

ASQ AUTOMOTIVE DIVISION

VISION: To be the worldwide automotive industry's leader on issues related to quality
MISSION: To facilitate continuous improvement and customer satisfaction by identifying, communicating and promoting: • Quality knowledge • Management's leadership role • Industry
Cooperation • Professional development • Recognition • Opportunities to network

COUSTOMERS: PRIMARY - Automotive division members - Automotive suppliers - all tiers • ASQ sections • Division sustaining members • Potential Automotive Division members

SECONDARY • Automotive original equipment manufacturers (OEMs) • Other ASQ divisions • Strategic alliances – SAE, AIAG, SME, ESD, ASI, organized labor • Community colleges/universities • ASQ headquarters/Board of Directors/General Technical Council

TERTIARY • Quality award initiatives (federal/state/local) • Standards activities • Automotive dealerships • International global markets • Aftermarkets/ service parts • Third party registrars
Recruiters/ consultants

From the Editor



Teresa L. Pratt Vice-Chair Publications

This edition begins with a message from our 2009-2010 ASQ Automotive Chair, Ha Dao. Ha brings endless energy along with a lively and expanded team. His team includes members from a multi-national, multi-generational workforce. The new team is ready to bring the ASQ Automotive Division to new levels, using multimedia!

Jaynie Vize has provided a summary of our **2009 Awards Banquet**. These awards events are always enjoyable, as we recognize individuals who have contributed significantly to their companies, their industry and society.

It was a pleasure to hear John Katona's acceptance speech. In his usual form, he humbly transformed his acceptance as **Quality Professional of the Year**, to providing insightful lessons of value for his audience. We have provided his acceptance speech for your pleasure. Please take a moment to read his philosophy towards quality, life, and sharing. His words are inspiring!

John Casey, 2008-09 ASQ Automotive Chair, has offered two articles, **How the Space Shuttle was Compromised by a Horse's Bum** and **Turning Reading-Across Dreams into a Strategic System for Growth.** John frequently shares his knowledge, and any article he writes is always a "must read."

John Casey discusses best practices, management engagement, and expert oversite providing one simple method to enable Read-Across and avoid the pitfalls of a non-documented process.

Procedures and Work Instructions provide one simple method for Read-Across. Review **Avoiding the Seven Pitfalls to an Effective Documented Process** for suggestions.

Michael D. Erbaugh shares important information and references regarding safety in his article, **Safety 101, Ensuring the Safety of Your Workers**. We welcome his expertise!

I'd like to welcome Rob Langdon, Publications Assistant Chair, to ASQ Automotive and offer my thanks for the continuing support of my team: Denis J. Devos, James L. Odom, Mike Prusak and Michael A. Shader. They continually offer their time and support to deliver this publication to you!

We are always looking for new authors and continued support from our frequent authors. If you'd like us to consider your articles for publication to share how you use a quality tool or method, a case study, or your passionate views related to our profession, please submit them to my attention. We'd love to hear from you!

Teresa L. Pratt Publications Chair 2009-2010 teresalpratt@aol.com

Call for Papersfor the upcoming symposium on April 26th in the following areas:

- Innovative Six Sigma Techniques Application
- Innovative Lean Principles Application
- Innovative Design for Six Sigma Application
- Case study of Automotive Engineers who have successfully career transitioned to other areas
- Quality Technique application in Healthcare

E-mail your papers to: shah.kush@gmail.com . Those selected will be published or featured in an upcoming CD.

LEADERSHIP



Ha Dao, ASQ Automotive Division Chair hdao@ssandco.com

As the incoming chair, I'd like to welcome all members to a new and exciting year!

The global auto industry is in the midst of a modern era depression with sales at record low levels. Changes abound from, restructuring, global mergers, tougher fuel economy requirements, and significant technological developments. Change and challenge are part of the auto industry today and will be as far as we can see into the future. How are you responding to the life in the fast lane of Automotive in 2009?

Whether you're new or a seasoned member of the division, there's never been a better time than now to be a part of the organization that's leading the way in quality in the automotive industry. We remain a proactive division in automotive quality leadership because of YOU, our members.

Recognizing that you are a leader in quality, ASQ and the Automotive Division's goal is to meet your specialized needs through specific automotive conferences, publications, and educational programs. Also of great importance is your opportunity to interface and network with other automotive quality leaders. You can do this by coming to our monthly council meetings or online meetings, attending conferences, and other networking activities.

We would like to invite all ASQ Automotive members to participate in the upcoming division programs planned for the 2009-2010 year. Our leadership team has just completed the business planning cycle in-line with our mission "To provide member value by identifying, communicating and promoting quality knowledge, professional development and networking opportunities."

Our business plan objectives and activities are:

- Increase Member Value: Hold joint meetings; Publish in Automotive Excellence Magazine; Reach-out to international members; Hold an ASQ Auto Division annual awards event.
- Provide Quality Knowledge: Organize annual symposium; Provide global basic quality workshops and webinars and video interviews; Host an Auto Division discussion board; Provide Auto Division speakers/subject matter expert database.
- Engage, Grow and Retain Members: Improve marketing and publicity for division;
 Participate at the WCQI annual meeting and exhibit booth; Conduct VOC surveys, feedback and analysis.
- **Develop Strong Council Leadership:** Conduct monthly council meetings; Provide council mentoring, training and development; provide Succession planning

To keep up with division information, be sure to check the **www.asq.org/auto** website frequently to get meeting details, news, training offerings and to register for upcoming events.

Behind the many ASQ activities are many people working quietly behind the scenes — thank you for your support and hard work. I would like to thank our past Chair John Casey and the entire council for their leadership and dedicated service for the past year.

If you have any questions or would like to become more actively involved in the division, please send me an email to hdao@ssaandco.com. We look forward to developing a strong and enduring association with you.

Have a Quality Year!

Ha Dao, Chair ASO Automotive Division

CONTRIBUTIONS

Quality Professional of the Year awarded to John Katona

by Teresa L. Pratt



John Katona

The ASQ Automotive Division Quality Professional of the Year Award recognizes an individual in the automotive industry who has made significant contributions:

- Leadership or managerial skills in implementing continuous improvement in quality;
- Services provided to the community toward furthering the understanding of quality systems and techniques;
- Support and encouragement of new and innovative ideas leading to the neverending pursuit of excellence;
- Demonstration of a high regard for team benefits and results.

The 2008 award was presented in June, 2009 to John Katona from Delphi Corporation. His acceptance speech is presented here.

Good evening! I want to thank all of you for taking time from your busy schedules to join us here tonight.

I am currently in my 40th year of service with Delphi Corporation, and 30 of those years have been spent in the Quality Profession. As a "quality professional", I have found that I am "at the top of my game" when I am simultaneously involved in four distinct activities - Learning, Teaching, Consulting, and Recognition.

Learn. I encourage all of you to continually strive to learn more about the nuances of our quality sciences. Take advantage of the ASQ Seminars

and Symposia. These are opportunities to learn from the true "masters." My initial contact with Dr. Deming was through ASQ. Continual learning will keep your skill set sharp - be open to learning new approaches. Don't ever fall into the rut where you believe that you already know enough - and, share what you learn.

Teach. Leverage your electronic resources. If you have global facilities or clients, then use the electronic conferencing resources to teach a class. Another great way to grow and to spread your knowledge is to send out a data set to your network and ask them to analyze it. The rules of this game - there are no "wrong answers - no one gets embarrassed." Use an e-mail thread to discuss the different approaches. Curiously, the more you teach people, the more they realize how much they need you. Teaching opens the door to the third activity I listed above - "field work" commonly called consulting.

Consult. "Field work" is what gives the consultant credibility. It is one thing to tell people what you have heard or read - there's a much higher credibility factor being able to tell people, "We did this and it worked!"

The senior pastor of your church may be very good, but isn't it always special when a missionary visits the church? Why is that? It's because the missionary has a contagious faith that has been deepened by having done field work. Their teaching has credibility far beyond what you get from purchasing training material from the church's home office.

Do work face-to-face when you can, and show people that this is "how it's done" in their world. Don't do what people ask for - instead, give them what they really need. Avoid the common trap questions - don't be tempted to give a quick answer without fully understanding the context of their question. Some examples include, "I have a quick question, what sample size do I need..." or "I want to do a DOE..." Don't let anyone hurry you into giving a quick answer - squeeze the context out of them!

Consulting/field work exposes you to an army of practitioners. Make a mental note of who the "dragon slayers" are. Then, take the initiative to recognize them.

Recognize. Recognition is my fourth and final point. I certainly want to thank Ha Dao for having taken the initiative to have nominated me for today's award. I have worked with Ha Dao for many years, and there was I time when I felt like I had "taken him under my wings" so-to-speak. Now I think he's turned the tables and taken me under his wings! I don't know how he did it, but I'm grateful for the opportunity of having been able to work closely with Ha Dao.

One of the mottos of many preschool teachers is to "Work hard to catch the child doing something good." Recognition carries with it an awesome power. Be generous with recognition!

Recognition actually establishes you in a leadership position and allows you to "cast a longer shadow." Having given people recognition also gives you the credibility to offer "course corrections." When you recognize someone, it can be a simple comment in passing, but go the extra mile and send a VME or E-mail to them and copy their boss.

So, in summary, the model that I aspire to use is to iteratively...

Learn—Teach—Consult—Recognize.



John Katona

If you aren't already an ASQ member, then by all means become an ASQ member. Then, help your co-workers take advantage of the many fine ASQ professional certifications and seminars. Also, be a talent scout - go to work today and start putting together the nomination for one of your co-workers as ASQ Quality Professional of the Year.

Thank you! John Katona



Turning Reading-Across Dreams into a Strategic System for Growth

by John J. Casey



Working in the corporate world, where new ideas happen constantly, everybody talks about the "Lessons Learned Dream". In the corporate world, the concept of finding best practices and then implementing them is like motherhood and apple pie. Who could disagree? But actually accomplishing this is often a real pipedream and it does not happen very well or very often. Why is implementing Lessons Learned so hard? Why is it that everybody wants to do it, but in reality, implementation progresses at a snails pace if it moves at all? How in the heck can we win? What do we have to do differently? Is there a formula to make this successful?

In working with many companies on this process, there seems to be a few obstacles and enablers that when placed in proper context may determine the difference between tremendous success and a frustrating waste of time.

The Primary Obstacles:

In any business environment, people like to be in control and like to operate within a comfort zone of knowing what is going on and how to handle the situation. Change is universally resisted (for both good and bad reasons), and effectively implementing a lessons learned or Read-Across Strategy is essentially asking people to change and therefore is naturally resisted. We find the primary obstacles as:

• Insufficient Need for Change

 The new idea may be good but our method is not "broken" therefore why fix it

• Lack of adequate understanding

 The new idea is a clever concept but it won't create that much of a difference

Looks like too much work

 Making the change may mean a total overhaul of the way we do things and if it doesn't work we'll have wasted too much

• Fear of Failure

What if it doesn't work – or doesn't work here

• Negative or Non Inertia

 The incentive to sustain the status quo is greater than the incentive to change

• Not Invented Here Syndrome

- If it's not my idea, it can't be better

In looking at Read-Across, you must accept the fact that real people—live hard working people who have great pride in their jobs and pride in the companies—have all of these concerns every day. It is not that they are not motivated, or that they are lazy or that they don't care. These are great people. They are motivated, hard working and caring. They also are the ones that have these truly bona-fide obstacles. So how do you change it?

Let me describe a scenario that seems to have all the elements that makes a Read-Across process work. Imagine during a plant visit, you notice a huge change in an operating method that was yielding some significant returns. The people are proud, they are fired up and they know that they have a much better method. Most of the time, the boss would be able to see the results somewhere in the performance metrics and want to go in and recognize his/her team for the improvement. In the process, the executive would end up seeing a rather enthusiastic group of people who are quite proud of their accomplishments and the boss would want to capture both the spirit of the team as well as the new and improved method and would look for a way to transfer the knowledge elsewhere.

The Catalyst:

Most of the time, the executive would contact someone he trusts that knows more about the new method and would ask that expert to go over to this "island of progress" and verify that

the ideas are solid and the gains are sustainable and repeatable. Once the expert gets on site and confirms that the better process is solid, they typically look for the key elements that make it successful. The expert knows that improvements usually can be rolled up into tangible results like quality, cost and profits and the true expert can accurately determine the value of the great new idea. They take the time to write down the key features and implementation steps and in short order, the expert can define a fairly comprehensive business case for the new idea in terms of costs and benefits, as well as the most likely locations within the corporation that could equally benefit from the better idea. What is also present at the best practice site is a person who is really proud of their accomplishment. They are turned on to the idea because they know it works. In fact they are so turned on that they almost become a evangelical about the idea. It makes their life better and they are motivated to share it.

With this knowledge, the sharing usually begins where the expert starts to visit sister plants and starts to articulate how the new method could help them. For the recipient plants, the new idea is usually met with the resistance to change. All the reasons come up and a "missionary journey" is usually needed to let the recipient plant people go see the new method for themselves. In the successful situations, the recipient plant people experience a metamorphosis where they go through a significant AH - HAH! Moment (a term coined by my friend Roger Ruggiero). This "Ah-Hah" moment is critical. The recipient person needs to convince themselves, in their hearts, that the new method is better and that it will fill a need that they have. Great Read Across processes include a multitude of ideas for implementation and they also include a certain degree of freedom for the recipient person to perform some tailoring of the idea to their local situation. They need some freedom in the selection process as to which of the many ideas to implement as well as some control of the timing. The customization is essential. The person receiving the idea usually needs to place their stamp of accomplishment on their implementation. It is like an artist signing his work. Giving the implementer the freedom to make these modifications not only increases



their commitment to the implementation success, it also provides a method to achieve new heights, to raise the state of the art.

The Reinforcement:

In order to make the Read-Across process solid, the top executive has a role to monitor and support the team in the implementation process. Smart executives will require a certain amount of change from each plant on an annual basis. If the executive is smart, he will challenge the experts to find an accessible place to store all the great new ideas (like a corporate shared computer drive) in a consistent business case format.

If the total inventory of read across ideas in the shared drive amount to \$2,500,000 worth of savings to a "recipient plant" the smart executive would establish an achievable goal for each plant to copy a certain percentage (20-30% or \$500,000-\$1 Million) worth of new ideas into their plant on an annual basis and monitor their implementation of the transferable ideas. It's also noteworthy to create a simple and visual monitoring device and schedule the review of the implementation in normal business planning meetings.

It is easiest for the executive to have a visual management tool to monitor implementation progress. What is needed is a simple chart that shows each idea and its implementation status. What most companies miss are the criteria to monitor the implementation. The change should be seen as natural steps that are trackable. The best ones have clearly defined phases with tangible criteria. For example:

1. Plant Management Commitment on a business plan to implement the idea with a local champion assigned to coordinate the development

- 2. Champion with a support team having made a visit to the best practice site with a documented implementation plan approved by the Plant Management
- 3. Implementation of the idea in a pilot location with a minimum of 30 days of actual use and documentation of the benefits from the new system
- **4.** Duplication in at least 2 other pilot areas with minimum 30 days use and documented benefits reviewed and approved by an "expert"

When these steps happen, the duplication of ideas generally flows throughout the plants. A spirit of controlled change usually envelopes the people and results multiplication begins. The process defeats many of the original obstacles. The freedom to choose, modify and establish intelligent timing helps the plant people feel a greater degree of control. The annual expectation level tells the people that controlled change is expected and the lack of understanding or the concept of "Too much work" will melt under the magnifying glass of scrutiny. When you view Read-Across as a system, you will see the need for these support mechanisms. The key to success is not in the pushing and hoping, it is in establishment of complete operating activity that is blended into the daily operating practices.

Top 10 Keys to an Effective Read Across System

- **1.** Top Management's direct engagement into the inventory of great ideas
- **2.** A routine process to review the Best Practices with a significant deployment group

- A well respected expert that can filter the good ideas from the others and can help articulate the necessary elements of the implementation activity
- **4.** A reasonably accurate method to estimate the value of the implemented idea especially into annual dollar value
- **5.** For each good idea, there is a passionate implementation leader a "Born Again Convert" that can enthusiastically describe the way it was and how the new way is better
- **6.** Easily accessible file of lessons with the value and tips for implementation
- **7.** A method that creates an AH-HAH moment for the receiving operation and personnel
- **8.** A reward system that motivates people to make some changes and try things out
- 9. Some local operating freedom that allows the receiving plants to prioritize the changes that have the most immediate impact and the ability to defer or pilot on a small scale, the ideas that seem to have limited local utility
- **10.** A simple and visible method to track implementation and sustainability

Join the electronic age!

Share your views by joining the ASQ Automotive Division Linked In: http://www.linkedin.com/groups?home=&gid=1383527&trk=anet_ug_hm



Chrysler LLC Hosts 2009 Awards Banquet at The Walter P. Reuther Museum

by Jaynie Vize, Awards Chair, ASQ Automotive Division



Walter P. Reuther Museum Entry Hall

Chrysler LLC was the Host Sponsor for the 2009 Automotive Division Awards Banquet held on June 23, 2009 at the Walter P. Reuther Museum in Auburn Hills, Michigan. Eighty-five guests were on hand to acknowledge the achievements of five individuals who have contributed significantly to the success of their companies, their industry and their society.



John Casey

Prior to the Presentation Ceremony, the guests had an opportunity to tour the museum. This was a wonderful opportunity for many to relive the "old days" and touch a bit of Automotive History and Memorabilia that isn't available elsewhere.

The Reuther Museum Serving Staff provided an excellent dining experience with cocktails, hors d'oeuvres and a buffet that got everyone in the mood to heartily welcome our Keynote Speaker,

Douglas Betts, Vice President of Quality and Chief Customer Officer, Chrysler LLC. Mr. Betts was introduced by John Casey, Chairman of the Automotive Division, ASQ. John welcomed everyone on behalf of the Division and Chrysler, LLC.



Keynote Douglas Betts

Doug Betts shared his observations with us about how Quality is perceived by the customer. He pointed out that dealer incentive programs and surveys focused on the wrong end of the process, resulting in "gamesmanship" by dealers angling for positive survey responses from their customers. He noted that people who don't return, don't get included in the surveys, and yet they hold the ability to spread the bad reports about their experiences. This is where the focus of the automotive companies should be: the customers who don't return, and why. Certainly food for thought in the Quality World.

At the conclusion of Doug Betts' presentation, John Casey presented him with an honorarium to the charity of his choice. John also took this opportunity to present the Division Chair Gavel to Ha Dao, who takes over the position for next year.



John Casey thanking Doug Betts



John Casey passing the gavel to Ha Dao

Awards were presented by the Awards Chairpersons as follows:

Our **Quality Professional of the Year Award** was bestowed upon John Katona, Global Deployment Champion, Innovation & Continuous Improvement Methodology, Delphi Powertrain Division, Delphi Corporation.

John Katona is currently working to deploy Innovation & Continuous Improvement Methodologies throughout the Delphi Powertrain Systems global enterprise. This includes significant programs of Six Sigma, Design for Six Sigma, and Shainin methods.



Kush Shah presenting the Quality Professional Leader of the Year Award to John Katona

His 40 years with Delphi includes assignments as an Industrial Engineer, Process Engineer, Divisional Statistician, as well as his current assignment mentioned above. He has been privileged to be able to learn from Dr. Deming, Dr. Genichi Taguchi, Dorian Shainin as well as many other tremendous professionals.

The **Quality Leader of the Year Award** was presented to Mary Gustanski of Delphi Powertrain, where she is the Director Engineering, Customer Satisfaction and Program Management



Carol Malone presenting The Quality Leader of the Year Award to Mary Gustanski

In her current position, Mary is responsible for definition, implementation and consistent execution of global common process for these functions. Additionally, she monitors global performance for these disciplines and assists with risk mitigation to close execution gaps.

In Ms. Gustanski's nearly 30 years of experience in the automotive industry, particularly in the Delphi

divisions, she has held many positions, beginning as a College Cooperative Student, in 1980. She became Global Director Manufacturing Engineering in 2003. Mary is very strong in implementation and compliance driving forward programs to implement lessons learned and manufacturing and quality system fundamentals.

The **Craig Awards** were designed to recognize outstanding technical papers in the area of Quality. This year the Automotive Division recognized one paper submitted, both for Superior Technical and Literary Achievement. These Awards are also accompanied by a token monetary honorarium.

It is as follows: "Using Energy to Solve Technical Problems" by William Maxson



Larry Smith presenting Craig Superior Award to William Maxon

The **Judson C. Jarvis Service Award** was created to recognize the individual who makes the most significant contribution to success of an Automotive Division conference.

This year's award was presented to Ha Dao, Director, SSA & Company.

Ha Dao, an ASQ Fellow, is a Director of SSA & Company (formerly Six Sigma Academy). Ha works with deployment teams to achieve process improvements through consulting, training, project execution and change management.

Dao has been active in numerous organizations, both occupationally and professionally in Quality. His credentials include: Six Sigma Master Black Belt, Shainin Red X Master, Shainin Rolling Top 5 Manager, Shainin Green Y Journeyman, Shainin Red X Reliability Engineer, and ASI Robust Engineering Practitioner. He also holds ASQ Six Sigma Black Belt, Quality Engineer and Quality Auditor Certifications. He is the Chair Elect of ASQ Automotive Division and past Chair of ASQ Dayton Section.



Chuck Tomlinson presents Judson C. Jarvis Service Award to Ha Dao

The **ASQ Member Leader Excellence Award** was presented to Elizabeth Hanna, Technical Director, Howard Finishing, LLC.



Kush Shah presents the ASQ Member Leader Excellence Award to Elizabeth Hanna

Our thanks goes out to the Awards Committees for the many hours spent in screening and selecting the award winners.

Should you have any suggestions for enhancing the celebration or if you have nominees for next year, please contact any of the committee chairs:

Jaynie Vize - Awards Chair

Chuck Tomlinson - Asst. Awards Chair

Kush Shah - Quality Professional

Carol Malone- Quality Leader

Larry Smith - Craig

Ally Hamood- Koth

Harold Brubaker - Jarvis Service Award



Safety 101 – Ensuring the Safety of Your Workers

by Michael D. Erbaugh, CHCM, CHMM

Ensuring the safety of its employees should be at the top of every business owner's mind. To make sure this happens, numerous governmental and industry agencies were created with the sole purpose of monitoring and enforcing their applicable regulations.

For those of us who work in the safety industry on a daily basis, it is helpful to know the history of the various organizations in order to better understand their mission and what role they play in ensuring a safe environment for U.S. workers. This article provides a brief overview, as well as the impact they have on our jobs.

One of the first safety-related agencies created was the Department of Labor (DOL). It was founded on March 4, 1913 under Woodrow Wilson to improve working conditions. In 1915, the Bureau of Labor Statistics was formed. This agency was not only important because it was the first move towards safety, but it also provided a way for tracking issues. A year later, the Office of Worker Compensation was created, followed by the Keating Owen Act that banned child labor in 1918 and the Women's Bureau in 1920.

One of the more well-known agencies is the Occupational Safety and Health Administration (OSHA), which was founded in 1971 under President Richard Nixon's administration. Its role was to promote the safety and health of America's working men and women by setting and enforcing standards, providing training, outreach and education, establishing partnerships, and encouraging continual process improvement in workplace safety and health. OSHA was giving the authority to not only issue fines, but also mandate arrest in extreme cases. http://www.osha.gov/oshinfo/mission.html

The concept was good, but it was almost immediately realized that there was too much disparity between large and small businesses and a change was needed. So in 1972, the disparity was addressed with the introduction of exemptions for small businesses. The exemptions included:

- Penalty reductions for companies of twenty-five (25) employees or less
- Fewer record keeping requirements for companies of 10 employees or less
- Exemptions for family businesses and farms

Working in cooperation with OSHA is the National Institute of Occupational Safety and Health Administration (NIOSH), which was founded in 1971 to eliminate occupational diseases, injuries, and

fatalities among persons working in industry through a focused program of research and prevention. http://www.cdc.gov/Niosh/about.html

There are numerous other agencies that are not primarily tasked with safety, but have major safety rules built into their regulations: The National Fire Protection Association (NFPA), National Electrical Code (NEC), the American National Standards Institute (ANSI), The American Society for Testing and Materials (ASTM), the Department of Transportation (DOT), and the Mine Safety and Health Administration (MSHA) are just a few of the agencies that have safety rules built into their regulations.

Once one of these agencies finalizes a rule into a law, it is recorded into the Code of Federal Regulations (CFR). For example, 29 CFR part 1910. 120 covers training for persons working with hazardous materials or who have a potential for working with hazardous materials. 40 CFR covers hazardous materials classification and 49 CFR is used for the Transportation of hazardous materials.

Many of these agencies also work in support of each other. When addressing hazardous materials and employees working with hazardous materials, OSHA and NIOSH work together like a hammer and nail. OSHA is the hammer and NIOSH is the nail.

NIOSH is not a regulatory agency. However, they work with the American Conference of Governmental Industrial Hygienist, (ACGIH) to define the acceptable levels that people can be exposed to in a given industry on a typical workday. This is calculated on an eight hour workday, five days a week and 50 weeks a year or Time Weighted Averages (TWAs). There are exceptions to these exposure levels, but we'll stick to the basics for now

These exposure levels are referred to as Threshold Limit Values (TLVs), and Biological Exposure Limits (BEIs). The levels can be found in a handbook published by the ACGIH on an annual basis. It is the bible for every Certified Industrial Hygienist (CIH) working with exposures. Not only does the TLV/BEI publication document chemical exposure levels (on approximately 700 chemicals), but also addresses exposure to biological materials/substances, noise, and some radioactive materials. As a side note, the Nuclear Regulatory Commission (NRC) gets involved with this, too, but that's a whole other article.

Threshold Limit Values and Biological Exposure Limits are not normally considered enforceable by law unless they are made into a Permissible Exposure Limit (PEL) exposure limit and published in a Code of Federal Regulations using the Time Weighted Averages. Since it can take an extended amount of time to pass a new law or amend an old one, it is possible that the Permissible Exposure Limits may be higher than the recommended limits until the law is passed. However, if you work in a health and safety field as a safety professional and you know there is a lower recommended exposure limit to a substance, you would be negligent not to use the lower number. Imagine sitting on a witness stand and the attorney for the plaintiff hands you the latest publication on TLVs and BEIs and points out an exposure limit that you ignored because the level was not published in a CFR!

NIOSH is also tasked with conducting on-site investigations to determine toxicity in the workplace, conducting research for other agencies and making recommendations for mine workers' health and safety. This authority is granted by the Mine Safety and Health Administration.

OSHA is charged with enforcing the prevention of workplace injuries, illness and death. They also enforce health and safety standards through Permissible Exposure Limits for Chemical/Biological, Laser and noise exposures, scaffolding, machine guarding, forklift and electrical (not the construction stage) to name a few areas. They have the power to fine violators and the right to arrest in extreme circumstances.

Despite the efforts of these agencies and business owners, safety issues and hazards still exist. The following is a list of the top ten violations for 2008. If you looked around your organization, how many of these can you honestly say you have addressed in your safety program?

- Scaffolding, general requirements, construction
- Fall protection, construction
- Communication standard, general industry
- Control of hazardous energy (lockout/tagout), general industry
- Respiratory protection, general industry
- Electrical, wiring methods, components and equipment, general industry
- Powered industrial trucks, general industry
- Ladders, construction
- Machines, general requirement, general industry
- Electrical system design, general requirements, general industry.

http://www.osha.gov/dcsp/compliance_assistance/frequent_standards.html

continued next page



Understanding the history of safety-related agencies and their missions is just one step to ensuring a successful safety program. Programs such as OHSAS 18001 help businesses manage their safety program and include ongoing oversight by accredited certification bodies.

Don't wait until something happens to one of your workers to address and strengthen your safety program.

About the author:

Michael D. Erbaugh, CHCM, CHMM, is a certified IRCA ISO 14001 Environmental Management System (EMS) and OHSAS 18001 Lead Auditor. He has been auditing for EAGLE Registrations Inc for five years and is the Registrations Service Manager for EMS and OHSAS. During his career, he served as the Health and Safety Officer for the United States EPA, as well as worked for an area Health District. Mike also conducts training on Environmental Health and Safety, and founded two companies specializing in underground storage tank regulations and safety consulting.

He holds numerous hazard and auditor certifications, as well as a Bachelor of Science degree in Environmental Sciences from Wright State University (Ohio) and an Associates degree in Radiation Technologies from Sinclair Community College (Ohio). To contact Mike, email him at **mike.erbaugh@eagleregistrations.com**.

How the Space Shuttle was compromised by a Horse's Bum

by John J. Casey

There are times when we get so accustomed to our real limitations that we just seem to ignore their true roots. When looking at business activities we need to understand the elements truly at its roots. If we can see and break the roots we have the opportunity to branch into new frontiers. If we ignore the roots, we may never know the core that is holding us back. Please enjoy the following short story which demonstrates this point.

The design of the Space Shuttle was compromised by a true horse's backside.

The standard gauge (the distance between the tracks) for railroad tracks in the United States is 4 feet , 8.5 inches. Doesn't that seem like an odd number (and no, it is not based on an easily recognizable metric value)?

Why was that gauge used? Because that is the way they built them in England and English expatriates were used to build the first railroads in the United States.

Why did the English build their tracks at that width? Because the first rail lines were built by the people who built the pre-railroad tramways, and this is the gauge that was used for their tramways.

Why did "they" use that gauge back then? Keep following it back to the people who built the tramways: they used the same jigs and tools that were used for building wagons, which used that wheel spacing.

Why did the wagons have this peculiar 4 feet 8.5 inch wheel spacing?

Well if they used any different spacing, the wagon wheels would break on some of the old long distance roads in England because that was the spacing of the wheel ruts in the old roads.

Where did those old rutted roads come from? Imperial Rome built the first long distance roads in Europe for the Roman Legions, and these roads have been in use ever since.

And the ruts in the roads? The Roman war chariots formed the initial ruts, which everyone else had to match for fear of destroying their wagon wheels. Since the chariots were made for Imperial Rome, they were all alike in the matter of wheel spacing. Therefore the United States standard railroad gauge of 4 feet 8.5 inches is derived from the original specifications for an Imperial Roman war chariot.

Where did the War Chariot's wheel spacing come from? You guessed it, a horse's bum. The comfortable spacing of two horses walking side by side is determined by the horses' butts, so they don't bump into each other (and fight) yet close enough to work effectively as a team. The horse's spacing drive a common distance for the horses hoof's creating the rut that the wheels had to match. This turned out to be 4 feet 8.5 inches.

Now the extension to the Design of the Space Shuttle.

The Space Shuttle is assembled in Florida at the Kennedy Space Center. They receive components from all over the United States and the best source for solid rocket fuel was located in Utah. Since the fuel cell is built in Utah, the delivery of the fuel cell to Florida became a factor in the overall design. The cell needed to be delivered by rail due to its size and mass. This means the fuel cell needed to travel through tunnels and across bridges as it journeyed from Utah to Florida.

The construction of the tunnels and bridges were designed to provide adequate clearance for the

railroad cars. The standard railroad car designs were optimized to provide maximum freight based on the standard platform deck. The standard platform deck was created as a ratio to the standard wheel spacing of the rails, which again was determined by a horse's hind end. So the relationship is linear, the size of the tunnels and bridge structures were all related to the rail spacing.

The ideal fuel cell would have been larger than the space available in the tunnels and bridges along the journey, and therefore the space shuttle design was compromised by a horse's butt.

An extension into our daily lives.

People are creatures of habit. We often fall into a rut or repeat our activities because they are familiar or brainless. We take things for granted and we accept life as it is, without challenging what is possible or logical. To remain as a thriving entity, we all need to grow and change with the times. Here in 2009 in America we are facing global business competition, we are facing economic stress and other related challenges.

My question is:

Are we struggling because of competition from outside or from complacency within our hearts and souls?

In my opinion, we are struggling because of our complacency, because it is an easy habit to embrace. The winners of the world have a different habit. That is the habit to constantly challenge the status quo and to find a better way. Aristotle said, "We are what we repeatedly do. Excellence therefore is not a trait, it's a habit." In order to remain excellent, we all must embrace the habit to change. Best wishes on your journey.

CONTROL



Avoiding the Seven Pitfalls to an Effective Document Control Process

by Teresa L. Pratt, CQA, CQM/OE

Why does the term, **DOCUMENT CONTROL** make a person's hair stand on end? An astounding reduction in process time and cost can be achieved by linking processes to documented procedures and work instructions. Documents are a tool or baseline to tomorrow's improvement if the organization continually evaluates their processes as defined. The concept is so simple and obvious, it becomes difficult! Listed below are seven pitfalls that may be encountered when attempting to document a quality or business enterprise system and suggestions to overcome them.

1. "I don't have time to document my work. I'm too busy doing it!" Sound familiar? It's much more difficult to map a process than react to it. In Shewart's Plan-Do-Check-Act cycle, it's called Planning. In Six Sigma's Define-Measure-Analyze-Improve-Control, it's called "Controlling."

An engineer can design a great automobile for the public, only if the design is documented in a CAD drawing or blueprint and shared with its builders. Why then, is a business documented procedure or work instruction avoided? Up front planning and sharing will prevent mistakes later downstream. In today's economy, where painful reorganization and downsizing takes place, organizations that have accurate procedures and work instructions are more agile in expanding and contracting to business needs. Why? They can visualize their organization and determine what procedures must stay and what must go - and respond quickly to stakeholder needs.

Those who do not map their systems will be in the Define or Measure stage of their Six Sigma projects while the enlightened organization is already Analyzing and Improving and adjusting their Controls.

2. "I don't know how to write a procedure or work instruction." Use the document control procedure required in ISO 9001 and corresponding industry specifications. Training or additional work instructions and/or guidelines may supplement the procedure. The turtle diagram used in the automotive industry has been helpful. Jim Collins, Plexus International teaches use of the turtle diagram with the input as "customer need" and the output as "customer need met". He describes the turtle diagramming process used to frame the Who, What, When, Where and How Many used in designing procedures. ISO 9001 also requires that employees are aware of the consequences to the customer. Consider including the Why in the document.

Other stakeholder "business pain" may be included, as described by Dennis Arter, *Quality Audits for Improved Performance*.

The concepts provided in project management may be applied to writing procedures and work instructions. How can we implement something that we can't describe and define? James P. Lewis, in his book, Fundamentals of Project Management, stated, "They (project managers) must understand the mission and vision of the organization first, then they must see how the project they are managing meshes with the organization's mission, and they must steer the project to ensure that the interests of the organization are met." When discussing the concept of monitoring and controlling, he states, "Control is exercised by comparing where project work is to where it is supposed to be, then taking action to correct for any deviations from target. Now the plan tells where the work should be. Without a plan, you don't know where you should be, so control is impossible, by definition." He shared a response to one of his engineers who told him once, "You can't schedule creativity." His response was, "this may be true, but we must pretend we can, because no one will fund the project unless we put down a time." Likewise, in order to implement the plan, standardized work aimed at specific business goals is desirable. It becomes much easier to write a procedure or work instruction when the writer keeps the output in mind.

3. "If I write it down, they may think my work is unimportant, or I won't be needed." My step grandmother used to say that when making some of her favorite family meals. Now that she has passed, no one can replicate them. Those family favorites passed with her. The same scenario happens in business, when a successor absorbs the activity of another without directions. When the predecessor did not believe in work instructions and was not otherwise compelled to write them, the successor will have no idea what deliverables are needed until someone asks for it, nor how to successfully accomplish the request.

Employees who share their knowledge with others improve the organization. The current state can be documented by process maps and linked to procedures and work instructions, explaining how the process is to be followed. Those who have practiced effective documentation can be counted upon to help others define and/or refine processes and to help analyze process linkages to desired

output. There is much work to do - and we need to be efficient about it. It starts with determining what activity is needed - and what is not. In these days of compressed response time, and fewer employees, any defined process or activity that is no longer needed needs to be removed. Once removed, those who were following a non-valued added process can concentrate on needed activities.

- 4. "If I write it down, I'll be auditable." Take a look at the measurable or goals within the organization. If the organization has a goal of "no nonconformities" in its internal auditing system, its employee stakeholders will argue against nonconformities in order to meet the goal. Is this the right goal for an organization? Does that mean if a process isn't documented, one is less accountable to make a process work consistently, or to make a product work as it was intended? No, it does not. In a developing, reactive or unenlightened organization, employees have a tendency to argue against an obvious "nonconformity" because they believe a process that is not documented cannot be judged. In a metric driven organization, metrics are identified and communicated to employees first to support self assessment. The auditors provide a second verification. Auditors compare the metrics achieved to the organization's goals. Using the process auditing approach, those auditors follow the process expected for achieving these goals to verify a causal and effective relationship. If the metrics show that goals are not being met - even when no procedure or work instruction exists to direct the workforce, the issue or "nonconformity" still exists. It is much better to communicate the desired process through a procedure and work instruction, track the success of that process, and adjust when improvements or corrections are needed. When work is made visible through defined and/or documented processes, the navigation toward improvement is easier to accomplish.
- 5. "I don't want to submit a document (or change to a document) because it will never be approved!" In any documented process, there must be some type of approval process. The first intent in the document approval process is to see if "fresh eyes" from other operators or employees who must follow the direction will understand the message and be able to implement it. Next, other stakeholders need to determine if they agree with the process as it relates to regulations, safety or interfaces with other functional requirements, and if they can live with it as it relates to the desired



output. Lastly, the stakeholders with overall responsibility to ASSURE successful performance must believe the desired output will be achieved, meeting the intent of the organization's goals.

If these are the three main objectives of a document, why is a documented approval process so painful? As a comparison with the product design process, a Design Failure Modes and Effect Analysis is used to mitigate risk, including human error prevention. Document Control for procedures and work instructions should be similar to an engineer presenting a product design to a multi-disciplinary team. In a procedure or work instruction, the failure mode lies in interpreting the written word. The variation can be astounding - especially in global documents. Lively conversations ensue during this stage. Those who feel comfortable enough to question how to interpret a work instruction or procedure are more likely to follow a process and subsequently suggest improvements. The facilitator of the approval process must take care that the document writer is not subjected to unbridled criticism from those who were not inclined to develop a document, but find it sporting to discredit it. The goal is to provide clarity of purpose and a synergistic output.

6. "I can't follow this - it doesn't make sense!"

If this argument is presented in the organization, here is the first question to ponder, "Is the procedure an extension of the company's organization chart?" Too often, the document owner is listed as the manager with overall responsibility to ASSURE that the process is performed rather than by the person who must either DESIGN the process (the subject matter expert who actually writes and maintains it) or must DO it (the operator or employee responsible to perform the tasks).

Documents should be owned by someone close to the process, preferably by one who performs the actual work. Involve the right stakeholders. Employees who perform the process are more likely to keep the document up to date when they feel the ownership for doing so. When ownership is not correctly assigned, responsibility and accountability are also misaligned.

Do not confuse the desired output with the appropriate process needed to create it. Procedures and work instructions must be written in the language of the person who must execute the process. Documentation helps eliminate variation within our communication process. The role of the manager, engineer, doctor, president or executive desiring the output should be included in the document APPROVAL process to verify the intent is met.

7. "This procedure is wrong, but I'll follow it and show you!" Should a procedure be followed if we think it's wrong?" Why was the procedure wrong to begin with? Has the process changed, and the procedure was not updated? Or was the procedure approved by the wrong people? How do you know it is wrong? In Quality Audits for Improved Performance, Dennis R. Arter applies the term, "malicious compliance," to this practice. Malicious compliance may happen when those who perform a process are not involved in documenting it. The person who must perform the process thinks, "You're the boss, so I'll do it (but the person is finishing the sentence in his mind, "But I'll watch it fail.") When the process fails, the person will defend his/her action by stating, "You wanted me to follow the process!"

If you are in management and hear the response, "You're the boss," investigate the response, adjust if necessary and/or proceed with caution! Unless the process is properly designed, communicated AND properly understood, it will not be followed. Non-compliance or non-conformity to the process will be due to inadequate knowledge - and that inadequate knowledge may belong to management!

If you're the employee, try using the language of management. What measurement or metric can be used to prove your point? Use it to help the organization.

The Road to Recovery: Designing the Documented Procedure Process with Metrics in Mind

If an organization focuses solely on conformance to a process, there would be no improvement. If, however, it focuses on conformance to a process in order to objectively evaluate it and improve upon it - then it will be a successful organization!

Donald J. Wheeler and David S. Chambers, in the book, *Understanding Statistical Process Control*, describe a paradox, "As long as management has the conformance to specification as its goal, it will be unable to reach that goal. If the actions of management signal that meeting specifications is satisfactory, the product will invariably fall short. Total conformance to specifications comes only by focusing on the continual improvement of processes. Thus, it is only when management supports, in both word and deed - the goal of continual improvement - that it will begin to see increases in both quality and productivity."

Use documented procedures and work instructions as the baseline. Once the standardized work is implemented properly, the next phase of improvement should begin.

How do I fix my document control process?

The best way to design a process is to determine the necessary roles and responsibilities for the organization's stakeholders and empower them accordingly. See the recommendation in Table 1 for designing the process:

The documentation process step:	Who should perform it:	
Identifying the Inputs needed	Stakeholders (the person who has a need)	
Process Design	Subject Matter Experts (for design, regulations, laws, interfaces) maps the outline or skeleton	
Process Execution	Those performing the process, activities or tasks write the steps in their own working language	
Process Approval	Appropriate Stakeholders requiring the process output or ultimately responsible for its success, verify it complies with customer, statutory, regulatory and/or business requirements.	

Table 1: Stakeholders involved in the Document Control Process



How do I know if my document control process is working? Follow the metrics! The need for documentation becomes most apparent in the situations described in Table 2. Which scenario applies to your organization? Effective organizations are proactive in defining their systems.

Situation	You're in trouble if:	You're prepared if:
You're a plant manager. Five hundred of 1500 people retire in the same week. You must hire or transfer people from another area to perform these jobs	No work instructions are available for those who are retiring or most of the existing work instructions are not current. Training material was never written, because new employees always "shadowed" current employees. As a result, the transition causes many customer complaints	Work instructions are available and current. Training material is available and always kept current. Experienced employees were involved in writing and verifying its accuracy. The transition takes place with no customer complaints.
You have to pick up the work of someone else who is no longer with the company.	That person didn't believe in work instructions, so nothing was written. You will have no idea what he or she did, until someone asks for it.	You supervised the person who left. You always encouraged the employee to write procedures and work instructions. You used those work instructions in the employee's annual competency reviews, so you know the information is current.
The customer base has drastically reduced its demand.	You need to know what activities can be removed or refined, but no processes have been documented. As a result, component parts are still being ordered and received, and your inventory backlog continues. You don't know how to stop it.	Your processes are mapped. Sequences and interactions are identified on the procedures. Responsibilities are identified. Because the process is "visual," you are able to react to changes in time to prevent inventory backlog.

Table 2: Scenarios identifying the effectiveness of the Document Control system

About the author:

Teresa L. Pratt is an experienced practitioner of Lean Enterprise, Six Sigma and ISO standards. She is the ASQ Publications Chair for the Automotive Division, and holds the CQA and CQM/OE certifications. She is a global audit manager and lead auditor for ISO 9001, ISO/TS 16949, ISO 14001 and AS-9100. She is also a PSP for Plexus International for ISO 9001, ISO/TS 16949 and ISO 14001.



Jim Odom

Jim Odom Receives ASQ Fellow

Jim Odom, President of Breakthrough Strategies LLC in Cortland, Ohio, has been awarded ASQ Fellow. An ASQ Fellow is an individual who has an established record of contributions, both to the quality profession and to the Society. The grade of Fellow is an earned distinction. The achievement of this status is a symbol of respect from colleagues that has been accepted by the highest officers in the organization. His Fellow citation reads as follows:

For outstanding contributions to ASQ at both section and division levels in promoting the Society and the understanding of quality techniques and principles; and for dedication and service to the Kent State community in providing direction to the quality profession and in teaching the next generation of quality professionals.

Jim is a Six Sigma Master Black Belt. In addition to his consulting practice, he teaches Lean Six Sigma Green Belt and Black Belt classes, and ASQ certification classes at Kent State University, Trumbull & Salem Campuses. Jim has served on the continuous improvement committee at Humility of Mary hospitals in the Warren-Youngstown area. He has also served as the education chairperson and treasurer of ASQ Section 0805 and is the current section chairperson. He is also the current education chairperson for ASQ Automotive Division. He has a bachelor's degree in electrical engineering technology from Youngstown State University and a master's degree in manufacturing management from General Motors Institute. Jim is the 2005 recipient of the ASQ Automotive Section's Quality Professional of the year award.

The ASQ Automotive Division congratulates Jim on receiving this prestigious award. We know he will continue to provide great value to ASQ and society.









Published by New Echelon and ASQ Automotive Division

www.asq.org