Nova Scotia Quarterly Connection

October/November/December 2013

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http://www.asq411.org
Local ASQ website

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ARTICLES for the Quarterly Connection

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REGISTRATION FOR EVENTS

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CERTIFICATION & EXAM QUESTIONS

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Canada Nova Scotia Section 411

Get to Know ASQ

ASQ is a global community of people dedicated to quality who share the ideas and tools to make our world work better. With millions of individuals and organizational members of the community, ASQ has the reputation and reach to bring together the diverse quality champions who are transforming the world's corporations, organizations, and communities to meet tomorrow's critical challenges.

As stewards of worldwide quality knowledge, ASQ is ideally suited to spearhead the unprecedented Global State of Quality Research study. ASQ is headquartered in Milwaukee, WI, with national service centers in China, India, and Mexico. Learn more about ASQ's mission, technologies, and training at www.asq.org.

Getting Involved

You can help your Section 411! Member volunteers are welcome to attend Board Meetings. Host fun events, meet new people and network with quality subject matter experts. For more information on how you can further your quality jouney, contact Susan Gorveatte, Section 411 Chair, susan@gorveatteconsulting.com

A note of appreciation:
Thank you to Jim Benoit of OHES in Dartmouth for hosting our fist event for the 2013-2014 year, Due Diligence for the Workplace. The event was a great kick off to a busy year!

Updates to the Executive/ Committee Chair Roles:

- Chair-Susan Gorveatte
- Chair Elect/Newsletter Chair-Paige McFarlane
- Treasurer-Susan Batchilder
- Secretary-Prakash Tejwani
- Program Chair/Voice of the Customer/Historian/Nominating Chair-Sandra Low
- Education Chair-Bruce Carlyle
- Certification Chair-Paul McAdam
- Membership Chair-Vernon Simms
- Auditing Chair/Website Chair-Ken Sadler
- Past Chair-Vishal Bhardwaj

ASQ's Vision

By making quality a global priority, an organizational imperative, and a personal ethic, ASQ becomes the community for everyone who seeks quality concepts, technology, or tools to improve themselves and their world.

ASQ's Mission

To increase the use and impact of quality in response to the diverse needs of the world.

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An Under Utilized Quality Tool - By Jim Evans

I ended up in the last newsletter with a hint about what I consider to a vastly under-utilized quality "tool".

Now I must admit that my statement is only partially true as this quality tool is actually used quite extensively and in some cases is mandated for use in some industries such as the aerospace and automotive industries. It is also widely used in the insurance industry where a variation of this tool is used to determine insurance premiums for hospital, but outside of those industries it is not well known.

Any guesses on what this tool is?

The tools is called Failure Modes and Effects Analysis (FMEA) or as it is also called, Potential Failure Modes and Effects Analysis (PFMEA).

It is surprising that most people who know of FMEA's, think that it is a quality improvement tool that was developed in Japan.
In fact the history behind FMEA's is that it was not a developed in Japan, but originated in the US in the late 1950's and early 1960's by reliability engineers as a result of "quality" problems that occurred with critical military and aircraft systems.

There are two types of FMEA's. One is a Process FMEA and the second is a Design FMEA.
They are in fact very similar but as the names suggest one is used when evaluating a "process" and the other when evaluating a product "design".

Due to space I will only touch on the basics of a Process FMEA in this article.
A process FMEA is a way of evaluating the steps within a process and looks at :

- what can go wrong,
- what happens if it does go wrong,
- how often things could go wrong and
- how good the process "controls" are to let you know if something goes wrong.
- FMEA's are usually conducted by a group of employees who have knowledge and/or data about the process being evaluated and can use brainstorming techniques (another quality tool!!).

Here is the basis of how a process FMEA is structured.

More Quality Quotes…

"There is nothing so useless as doing efficiently that which should not be done at all" –Peter Drucker

"Condemn the fault, and not the actor of it." - William Shakespeare

"Quality is not an act, it is a habit." -Aristotle

Have You Heard?

Over 95% of unhappy customers do not complain when they are not satisfied. Over 90% of upset customers do not return. Each unhappy customer will tell 10 others about their bad experience. Quality Customer Service is the Real Competitive Edge!

OCTOBER CONTEST!

Do you own an item that has lasted a long time —such as a car or appliance? Do you frequent the same favorite restaurant or hotel all the time? Submit a photo of your item—or receipts, loyalty cards, etc.—for a chance to **win a digital camera** in the **#QualityLasts** contest! Please encourage the members of your member units to participate and help spread the awareness of World Quality Month! check out www.asq.org!

You begin by listing each step in a process as well as the potential failure modes (things that could go wrong) in each process steps are listed.

Next, the effects (what could/would occur if the failure mode actually happened) for each of the potential failure mode listed are listed, and then each of these effects is given a numerical ranking based on the severity of the effect.

Next, the potential causes of each potential failure modes are listed, each probable cause is given a numerical ranking of the probability (likelihood) that it can occur.

Next the controls that are currently in place are listed for each potential failure and numerically ranked for their ability to detect if the failure actually occurred.

The individual rankings for the severity of the effect, the probability of occurrence and the ability to control and multiplied together which results in a risk priority number (RPN). The individual RPN's numbers for each potential failure mode when placed in order of magnitude, indicate which areas of your process have the highest risk of producing and not detecting a nonconformance with the largest RPN's being the one with the highest risk. This is done using the Pareto principle (another simple Quality Tool) to select the top 20% of the potential failures as those with the largest risk priority numbers (RPN).

The next step is to look for ways to reduce the RPN's for the top 20% of the potential failures.
To reduce RPN's this is done by identifying ways to and making changes such that you:

1) Decrease the severity of the effect and
2) Reduce the probability of occurrence and
3) Improve the ability to detect the non conformance when it does occur.

There are some complexities in determining the ranking scale to use (1 to10 vs. 1-5 etc.) The key here and I won't go into that here but I hopefully a tweaked your interest on this powerful quality tool.

Now, the question is when should you use this tool?
The answer is "as soon as possible. What I mean by that is if you use it while you are designing a process as it will help you identify the potential areas of failure before you actually start using the process. However it can also be applied to existing processes that are failing to achieve the desired/required levels of quality. So, the sooner the better but it is never too late.

The Benefits of ISO 9001:2008 Certification

Customers expect quality products and services, on time and at reasonable prices; they want value. Quality policies and procedures, like those developed in conjunction with ISO 9001:2008 standards, can help you to consistently meet or exceed your customers' needs and expectations.

Who Should Implement ISO 9001?

Although ISO has been seen as primarily for the manufacturing industry, anyone can implement an ISO 9001 quality management system. There are trucking companies, personnel agencies, distribution centers, software developers, janitorial and hardware manufacturers all certified to ISO 9001.

The following is a checklist of potential candidates for registration:

- Your biggest customer requires ISO 9001 of all suppliers
- Customers demand you demonstrate quality assurance
- Your customers are government agencies
- Your customers are International
- Your customers are off shore, auto makers or aerospace or supply to them -- you are a second or third tier supplier
- You need a better supplier management program
- Your company is losing business due to poor quality
- The same tasks are performed differently by different people resulting in inconsistent output
- Your major competitor has adopted ISO 9000
- You want to implement a quality management program but do not know how

If you checked off just one of these boxes you should strongly consider implementing an ISO 9001 system.

Another key factor is that FMEA's should be living document. What I mean by this is that once you have created a FMEA and you begin to capture actual information on the process itself, you can, and should go back and update the information you originally used in creating the FMEA, such as the failure modes that actually occurred vs. what you thought might occur, the frequency that the failures actually occurred vs. what you thought may occur as well as how good the controls that you had in place actually worked. Also once you have made changes to the process that were designed to reduce the RPN's, you need to continue to capture the information to determine how effective the changes were.

Hopefully for those not familiar with FMEA, I have peaked your interest and if you are interested in a workshop that can help you gain a more in-depth understanding of either Process and/or Design FMEA's and that would give you enough of an understanding so that you could perform an FMEA yourself, contact Sandra Low at sandralow@eastlink.ca and let her know, as I would be willing to put on a workshop for those interested.

Jim Evans is a Senior member ASQ and dedicated newsletter writer

Exam Dates: The Value of an ASQ Quality Certification

Did you know that you can access the ASQ Exam Schedule from the Section website? Just click on www.asq411.org for more information.

ASQ certification is a formal recognition by ASQ that an individual has demonstrated a proficiency within, and comprehension of, a specific body of knowledge. Nearly 150,000 certifications have been issued to dedicated professionals worldwide.

Invest in your career and your future with an ASQ certification. Gain an advantage over your competition and increase your potential for a higher salary.

Exam locations are worldwide – through local ASQ sections and international affiliates. Please check exam dates & deadlines carefully. We will make no exceptions. All deadlines are at 11:59 p.m. (Central) on the date specified. So what are you waiting for? Get your value-addded Quality Certification today!