WELCOME MESSAGE FROM THE CURRENT CHAIR OF AMIG

I wanted to extend a warm welcome to all and the hope for a long and fruitful experience as a member of the Advanced Manufacturing Interest Group. Since we are new, we have a chance to mold the Group the best way we can, and take it to the Division level under ASQ as soon as possible.

The Goals of AMIG can be found on our website at www.asqamig.org. Because we are a volunteer group, everybody’s help in meeting those objectives is vital. Participate in the “Listserve” discussions which are very ably managed by Linda Milanowski of ASQ; Write an article for the next issue of our newsletter which will benefit the other members; Volunteer to be on our speaker’s list; or help with conferences including the next AQC, to be held in Toronto next May.

The AMIG is partnering with several local Chicago sections to present the Northern Illinois Quality Conference on September 28, 29 and 30 of this year. The conference will be held in the Chicago area. The conference is titled “Thriving in a Lean environment”. Please check out our web-site (www.asqamig.org) for details.

Special thanks to our newsletter editor, Randy Fisher for stepping up to the plate, and to our secretary, Tony Manos for doing all those many chores beyond the call of duty!

Again, welcome. Any suggestions that you might have can be e-mailed to me at galukal@cmcusa.org.

George Alukal, Chair, AMIG

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Recession-proofing the Quality Professional
By Anthony Manos

Q. How do quality professionals recession-proof themselves?

A. Make yourself more valuable to your organization.

An observation I have made over the years when economic times are tough is that organizations seem to make cuts in two specific areas. The first area cut is safety and the second is quality. Are you shocked? Unfortunately, if an organization doesn’t have a safety department, then the first to go is quality. You probably know a fellow quality professional that has been laid-off or let go because companies had to cut back during uncertain times. Obviously, it doesn’t make sense to reduce safety or quality, but unfortunately that’s what some companies do. It is striking to me when quality professionals are caught off guard by this phenomenon. Have they never seen this before? Wake-up and smell the coffee. Hey, we are quality. We are supposed to be customer focused and have a continuous improvement philosophy! Then why don’t we see our employer as a customer of our education, skills, experience and (gasp) competence? Why don’t we continuously make ourselves more valuable to our employers?

I believe that quality professionals have so much more to offer in other areas of our organizations, but we just don’t recognize it. What marketing group wouldn’t want someone on their team that has excellent problem solving skills, that is customer focused and has knowledge of statistics? What production function wouldn’t want a team player that practices continuous improvement and has a plethora of tools that can stabilize variation, identify problems, propose solutions, implement them and eliminate the root cause? Some of our “soft-skills” that we possess could help out a customer service department with improving customer satisfaction. I bet purchasing could use someone very knowledgeable in acceptance sampling and auditing. What about changing paths altogether and going into training or teaching?

If you feel that you might be on the bubble or need to change things up in your career, have you looked outside your life in the quality department? When organizations hire employees, they look for skills that a quality professional already has and is practicing everyday. Take your next ten-minute break and use it to start a list of skills you have learned while performing the duties of a practicing quality professional. Here are some examples to get started: project management, Pareto analysis, team-building, measurement and metrics, effective meeting facilitation, etc. Do this twice a day for five days and I’ll bet that you will have a list that was longer than you could have dreamed of.
Recession-proofing the Quality Professional
Continued

Shoot for a minimum of fifty skills. Now, look around. What other areas in your organization do you think could use these skills? What other areas have you thought “I think I might like to work there someday?” Have you ever thought about approaching your boss and saying “you know, I love a challenge and I was wondering what would it take for me to use my skills to help out other areas in our company?” And then go to the chief in the area that you are interested in working with and say the same question. Is it risky? Maybe. Could it be the best move you ever made? Absolutely!

Don’t get caught off guard. Reinvent yourself. Make yourself so valuable to your organization that there is no way they would let you get away. Heck, you might even get a promotion or better yet, a raise!

Anthony Manos is a CQ Manager, CQE, CQA and not a career counselor. Anthony currently serves as the Secretary of the AMIG.

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You Spoke!
By Kam Gupta

In the May 2003 edition of AMIG listserver, following questions were asked, “How did you get started with Lean? What barriers did you overcome?

This was our first attempt at AMIG to engage the readers in self-learning, meaningful interaction. The questions generated a lot of interest. I read all the responses with interest and decided to summarize them for general reading. If you are interested in reading each individual response, please e-mail me at citkam@aol.com (even if you have e-mailed me earlier)

Those who responded included consultants, educators, and actual practitioners of lean thinking. In response to what initiated the lean effort in their organization, there were three common reasons:
1. Management decision
2. Customer pressure/mandate as part of their supply chain (fear factor)
3. Part of a strategic plan

Most respondents indicated applying some combination of classical lean tools in their company. The approaches ranged from a fully formalized approach to informal, exploratory approaches. Here are two examples of general approaches taken:

(i) Follow the Lean guidelines
- Create and validate a "Current State Value Stream Map" (facility wide or selected area)
- Create "Future State Value Stream Map"
- Develop action plan to get from "current state" to the "future state"
- Work on the action items listed in the plan (pull system, 5-S, etc.)

(ii) Begin with kaizen
- Lock down the gains with reproducible time-based standard work
- Train, set the tone, create accountability, and monitor customer impact areas (or islands of vision) with clear visibility
- Reward success

On the issues of obstacles or barriers to success, the list contained many familiar problems. It is comforting to know that one is not alone in having problems with lean implementation. Here is a list of some of the challenges:

i. Maintaining normal production output while making the transition to "lean" at the same time

ii. Conflicts with delivery dates versus taking the time to apply lean principles (that should give the internal customers the opportunity to schedule on-site and pull the resources they needed to meet milestone dates)

iii. Doing away with existing systems, like SAP and, instead, listening to the real customers, employee buy-in, and having the guts to shut down a poor performing area that is behind on deliveries, in order to improve it.

iv. Top management maintaining separation between lean and business as usual. Therefore there was no buy in among middle managers.
Some of the suggestions offered by the respondents to overcome obstacles included the need for:

(i) **Strong operational support**
“We’ve had to rearrange our priorities a time or two and some lean transition actions have had to wait accordingly. However, our director of operations is very good about following up and we do not allow things to be forgotten or cast aside.”

(ii) **Cross functional input**
Work with industrial engineers to help organizations develop Lean Management Systems that include planning for lean and other processes so the system (and those of the customers and suppliers) can be improved to become leaner with each cycle.

(iii) **Company/ department culture**
Culture change needs to precede management systems so we bring the organization's leaders up to speed so they can demonstrate their commitment to lean requirements to the employees who have to make it happen. (Supervisors should be leading the changes in the area by guiding employees and setting expectations. Leadership is always responsible for properly guiding the firm.)

(iv) **Start slow/ Start local before going company wide**
Build a base of knowledge and support on the shop floor. Now, three + years and many kaizen events, later the company is getting pretty good at the process. It’s ugly difficult work, complete with long hours and ruined clothes. We have to err on the side of change.

Lean is “Fat” when it comes to:
- Reduced lead times, paperwork, or non-value-added activities
- Improved efficiency, throughput, or profitability

For the next Issue I will like to pose the following question:
**How to implement lean in a job shop that usually handles hundreds of part numbers, has different processes with varying quantities and frequency of production? Is it really desirable to have lean for every part, regardless of economy?**

Kam Gupta is president of Continuous Improvement Technology, a company dedicated to value based improvements related to achieving excellence (MBNQA, Lean, or ISO/QS related). These improvements are accorded both in personal and organizational environments in all industry groups. The business succeeds due to excellent referrals from its customers.

Kam had also worked as VP, Mfg. (turnaround), plant manager, and director of QA in various big and small organizations. He has learned and applied emerging tools and technologies at companies like Admiral Tool, Matsusita (Panasonic), Harley-Davidson, and Eaton Corp.

Kam holds an MS in Engineering Management from MSOE, Milwaukee, WI. He has served on the Board of Examiners for MBNQA, IL. Linclon Award for Excellence, and at various ASQ sections.
Welcome new Advanced Manufacturing Interest Group members.

As the new Incoming Chair of the Division Affairs Council, I eagerly look forward to your contributions to the AMIG and to all of the Quality professional organizations with which you have chosen to associate. You are the future of quality. Perhaps more than any other group, you in the AMIG represent all the professionals who use quality tools and techniques but who may not have “Quality” in their titles. I believe that Deming, Juran, and Crosby would all agree with Taiichi Ohno that continual process improvement should be a part of how every company does business.

We at the D.A.C. are excited about this, the first edition of your electronic newsletter.

As a new interest group, we should first agree upon our strategic purpose. Having a strategy enables you to make day to day decisions based upon your expected outcomes. Without a strategy, the leadership can not know how they fit or what should be their course of action.

Let’s look at an example. If we are going on a trip, the first step is to pick a destination. Once this has been completed you can start planning and making decisions. In the same manner, company leaders (or Interest Group leaders) must agree upon what type of business they are or want to be before any other decisions are possible.

Having a strategy allows everyone to work together to achieve goals. We have all felt like ‘mushrooms’ at times, always in the dark and constantly fed fertilizer. If we want the most out of people we must share our goals and desires with our fellow workers at all levels.

Having a strategy enables us to efficiently use our resources. Lean manufacturing methods allow us to focus our energies better so that we may produce better, faster, and at lower cost. To achieve this we must all have a clear understanding of our goals and products.
A defined strategy quantifies the results for current and future improvement. Someone once said, “If it can be measured, it can be improved”. The need to continually improve a process or product is not only related to the reduction of defects but to improving methodologies thereby improving results and allowing us to refocus our time, talent, and dollars.

A simple way to look at this is by asking - What would I do differently if I were going to Hawaii or if I were going to Alaska? The answer - Almost everything. Knowing where you are going makes all of the difference.

Good Luck!

Chuck Miller
Chair, Division Affairs Council

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A Balanced Quality System
By Randy Fisher

Part I of II

Purpose
A Balanced Quality System is a team-based quality improvement system designed to enable all employees to not only satisfy the needs of the customer, but also to actually strengthen the customer. The employees accomplish this by immersing themselves in their processes and continuously improving all facets of their operation. By using the Kaizen philosophy (never ending opportunities for improvement) and well known quality improvement tools, a Balanced Quality System empowers employees to assess, measure, and document current conditions; perform root cause analysis; and plan improvement activities using the PDCA system (Plan, Do, Check, Act). As employees grow more comfortable with the system, teamwork will improve; communication problems will be minimized; and employees will accept ownership over their processes whether it is on the manufacturing floor, in customer service, or in the boardroom itself.

Audience
This system is intended for all employees. It is crucial that employees at each level, from the production floor to the executive suite, learn, participate, and incorporate this system into their daily activities. 5-S, Problem solving, and standard processes, once incorporated into a routine, allow employees to be more organized, perform more consistently, and solve problems more effectively.

Overview
Traditional quality models based upon the fulfillment of requirements are no longer sufficient in today’s marketplace. The Toyota production model (which was built with the help of Deming and his peers) has broadened its influence in American manufacturing circles, as witnessed by such common practices as Just in Time manufacturing, lean manufacturing, six sigma, customer-supplier relationships, and the use of other similar tools. None of these “imported” quality pieces get to the heart of the matter, which is to align every member in the organization to one cause, that being to strengthen the customer. A Balanced Quality System (figure 1) accomplishes just that.

A Balanced Quality System starts with the customer. He is the king and driving force in every business. Understanding his needs is essential to making him strong. This goes beyond mere specifications and fulfillment to knowing what it will take to ensure that he takes pleasure in doing business with your company. Understanding his needs means developing a personal relationship with him that will add synergy to the business relationship. Strengthening his business and allowing him to succeed will give your own business the opportunity to grow as well.
In a flat (lifeless) relationship (fig. 2), needs and success are balanced so that the customer does not improve even though requirements are met. Here **customer needs equals customer sleeps**! In this case, there is neither loyalty nor joy in the relationship between your customer and yourself, and nothing more than price will allow him to stay.

In an unhealthy relationship (fig. 3), where needs are not fully explored nor supported by the process, the customer will actually be harmed as a result of his relationship with you. In this case, **customer needs equals customer leaves**! You can be sure that they will not be back if at all possible.

Notice that, in a Balanced Quality System, the business processes are balanced in such a way (fig. 1) that customer success is above customer needs. **Understanding customer needs equals customer succeeds**! Think of a seesaw. In order to raise one end, you must weigh down the
other end. The more understanding you have of the needs of your customer, the higher you will be able to raise him.

Once customer needs are fully understood, the business processes are balanced to help him succeed by giving him exceptional Transactional Quality, Seamless Delivery, and Value:

**Transactional Quality** - This goes beyond traditional quality models that focus on product quality. Transactional Quality means that every process from answering the phone and entering an order, to manufacturing the product, through all processes affecting that order throughout the life of the product are error free. This means that the processes in all departments must be monitored, measured, and managed with a focus on bringing “joy” to the customer.

**Seamless Delivery** - It is not enough to get the product out on time. All processes, including scheduling, manufacturing, packaging, and delivery, must be error free so that the customer gets the proper material in the proper quantity, packaged properly, with the proper paperwork, to the proper location on time every time.

**Value** – Traditional manufacturing systems stress lowest cost possible as their driving force. Although low cost is vital, it is insufficient in building relationships with customers. In today’s economic environment, value will eclipse cost as the priority. By giving a customer the best value, you will strengthen his position in his market. Some examples of added value for the relative same price include exceptional Transactional Quality, Seamless Delivery, market assistance, technical expertise, quality exchanges, and other relationship builders.

Balancing the business processes in such a way as to “lift up” will take considerable determination, persistence, patience, planning, and effort. It will not be accomplished easily, or quickly. Each day you must strive to improve your business processes, which is a job that will never be completed. This is the concept of Kaizen. Kaizen is a journey to perfection, one that can never end:

*Visualize a road across a long prairie that disappears into a rise on the horizon. As you come over the rise you see that the road continues on again to the horizon. That is Kaizen, always looking to the horizon. In Quality, it means continually seeking improvement.*

What supports your business processes? That’s easy! Everything everyone does using every machine and every material! It takes a systematic approach to coordinate all efforts in a continuous unified effort to please and strengthen your customers. This can be accomplished by focusing on the 6M’s: Man, Method, Machine, Material, Measurement, and Management. Traditional quality systems using the first four are incomplete in that only through measurement and management can the first four M’s be continuously improved.

**MAN**
All employees must not only understand the needs of the customers, the overall business processes, and the specific processes under their control, but they must see themselves as part of those same processes. They must understand their current condition, the desired conditions, and
how to keep the two as one; they must be motivated to perform in a consistent, dedicated manner, never accepting the status quo and always looking for ways to improve the processes and their effectiveness. In the modern quality system, workers are the blood of the plant; they nourish the plant, maintain its health, and fight any abnormalities (disease) they encounter.

METHOD
Procedures must be documented, understood, and continuously improved. This applies not only to the manufacturing floor but also to all phases of the operation. ISO 9000 and standard work must be aligned to the needs of the customer so that improvement is consistent and documented. Employees must have the tools to improve their processes so that time, energy, and resources are not wasted.

MACHINE
Machines must never break down and must produce high quality parts all the time. They must be clean, maintained, and free of failures. Set up times must be continuously reduced. A customer should never have to suffer because of a machine problem.

MATERIAL
Just as it is vital for you to know your customers’ needs, it is equally important to communicate your needs to your vendors and monitor their performance to your needs. Supplier/customer relationships must be developed under the same guidelines, whether you are the customer or the supplier. Your vendors must be able to supply you with high quality materials and services on time every time so that you may serve your customers better. Remember that your suppliers are part of YOUR process. Their successes enable your successes, and their failures become your failures.

Man, Method, Machine, and Materials (the 4M’s) are well known in Quality circles and are used throughout the world for identifying process controls. They are incomplete, as they don’t provide you with ALL of the means by which you control your business processes. Measurement and Management are the “missing links” in this process chain without which no control or sustained improvement is possible.

MEASUREMENT
It is essential that processes be measured against the needs and expectations of the customer so that they may be analyzed and improved. All measurements must be in series and must be compared to standards and/or previous measurements. Improvements must be fact based and measured to verify effectiveness. Without a sound measurement system, we cannot truly understand what direction we are moving in.

MANAGEMENT
Neither this nor any other Quality system is intended to replace good management but must incorporate good management techniques into the system. Managers and supervisors must
understand customer needs, understand the business process, and understand their role in the continual improvement of the company. A company cannot succeed without good day-to-day process management. Man, method, materials, machines, and measurements must be carefully attended to and…. MANAGED!

Next Issue: Building Blocks for a Balanced Quality System

Randy Fisher has over 24 years experience in all phases of process industries, including Process and Quality Control, production, shipping and receiving, secondary operations, safety, and environmental control. Fisher interned under K. Iwamoto of Furukawa Electric Company, Tokyo, for five years, training on Toyota production systems; additionally, he received one year of intensive training in the 5-S’s under T. Tsurumaki. Fisher has spent the last 13 years designing and implementing balanced quality systems, which are based upon both ISO documentation principles and the Toyota production system. Fisher is an accomplished team trainer and facilitator with experience in a variety of organizational structures. He is currently the Quality Assurance Manager at the Philadelphia East Plant for The Smurfit-Stone Container Corporation.

If you would like to publish your experiences, please send them to me at rfisher@smurfit.com.