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Celebrate Earth Day
April 22, 2009



Going "Green?" –
Insyte can help
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Tyson Anticipates \$300,000 Impact from Six Sigma Training

Over the years, Tyson Foods has consistently produced high quality products with minimal internal or external quality issues. Although there had been various shop floor controls in place, plant management recognized that, in most cases, the root causes of problems were not identified or understood. Elements of both lean manufacturing and Total Quality Management were introduced to address this issue. However, both methodologies met with mixed and limited results.

Company Background

Tyson Foods, Inc. is a manufacturer of processed meats including hams, various smoked sausage products and numerous cold cuts, both bulk and sliced. The company's products are sold nationally, both direct and through food brokers, to restaurants/delis and major retail chains like Kroger's and WalMart.

Manufacturing operations are conducted on two shifts at the Buffalo, NY plant, with sanitation functions addressed on the third shift. Although the 200,000 square-foot facility was built in 1952, its single floor layout meets modern manufacturing standards for efficient product flow. In addition, the compa-



Ham mix is poured into molds prior to baking at Tyson Foods.

ny has continually upgraded both plant and equipment in order to maintain competitiveness. Tyson Foods currently employs 450 people, including about 300 hourly production personnel.

Insyte Provides a Solution

Management believed that Six Sigma methodology would enable the company to better determine root cause analysis and subsequently introduce the appropriate corrective actions. Since Six Sigma addresses process variation, it would be very compatible with lean manufacturing activities that are

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Changes to the ISO Standard – What it Means to You

by James Johnson

As you may be aware, a revised version to the popular American National Standard Quality Management System – Requirements ISO 9001:2000 has been published. This article will summarize the changes so that

you can understand how these revisions may affect your company's certification.

The new version of the standard is referred to as ISO 9001:2008. The governing bodies

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Survive to Prosper

by Benjamin Rand

The drumbeat of bad economic news continues. Lay-offs, bankruptcies, bail-outs and the continuing slide of the stock market have consumers and businesses alike on edge. Clearly, this recession is differ-

ent from any in recent memory and it signals some fundamental changes in the economic landscape that will persist after the recovery. For example, credit and leverage are likely to look very different after the turnaround. Consumer saving and spending behavior could be altered for quite some time.

How are companies faring in the current environment? Certainly some businesses are fighting for their survival. They need to slash expenses and carefully manage their cash flow if they are to stay alive until the economy improves. At the other extreme are companies that sense the opportunities this situation presents and want to position themselves to take advantage. Their challenge is how to look into the future and understand the likely contours of the post-turnaround economy so they can benefit from it. In between are the vast majority of businesses which are feeling the pain of this recession and have hunkered down in their fox holes to wait it out. Their vision only extends through the next 6-12 months. The risk for these companies is that their inertia results in missed opportunities both to improve their current profitability and competitiveness and to position themselves for the turnaround. The worst case scenario for them is that their selective cutbacks damage their core competence, the very capabilities or attributes that caused their customers to buy from them in the first place. If this happens, their long-term survival will be at risk even after the recovery.

Insyte Consulting was built for difficult times like these. From our genesis in the midst of the recession in 1982 to now, our objective has been to help manufacturing and technology companies to survive and prosper despite a trying economic climate. The challenges of doing business in WNY, even in

non-recessionary times, have prepared us well. Now we are introducing our STP (Survive to Prosper) Diagnostic designed to assist companies in weathering this recession. Our aim is to quickly assess a company's current situation to identify any threats to its survival. Next, we identify opportunities for cost savings and operational improvements. Then we examine their markets and customers to predict when demand might recover so the company can be ready.

In addition to our consulting services, an important part of the value we deliver to our clients is our understanding of, and work with, the broad network of government agencies and other entities that can assist businesses in our region including: the industrial development authorities with loan programs and tax incentives; economic development entities with grant programs and funding assistance; local colleges and universities with training resources and unique technical expertise; and organizations like manufacturing associations and professional societies that can offer technical information and support. This network can be an important safety net for businesses in difficult times.

So, whether your company is fighting for its survival or trying to discern future opportunities, Insyte can help. It is what we do.

A handwritten signature in black ink that reads "Ben Rand".

Get Up to \$40,000 with National Grid Program

National Grid is partnering with Insyte Consulting and other NYS Regional Technology Development Centers to offer a new grant designed to help WNY manufacturers. The Manufacturing Productivity Program (MPP) provides matching funds as detailed below.

Companies with Manufacturing NAICS

codes 31, 32, or 33 are eligible to apply. Insyte will assist with the application and provide a detailed contract, including projected benefits for the work involved.

Eligible companies must be in the National Grid service area and be willing to commit adequate time and internal

resources to ensure a successful project. Reimbursement will take place after project completion and documentation of measurable benefits.

Insyte has all of the details of this exciting opportunity. To learn more, contact John Murray or Bill Shepard at Insyte Consulting — 716.636.3626. ❖

Project Type	% Reimbursed	Maximum Reimbursement
Lean manufacturing or manufacturing assistance projects that result in eliminating waste & increasing productivity on the shop floor or in the office environment	40%	\$15,000
Growth targeted activities that result in greater utilization of plant capacity — including sales, marketing, and Eureka! Winning Ways projects	50%	\$15,000
Projects that combine both process waste elimination & top line growth	60%	\$40,000

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have traditionally updated the requirements since their inception; this is the latest version.

The first thing you must know about the 2008 version regards timing. The new standard was officially published on November 15, 2008 and the governing bodies have given all companies a two year grace period to update their Quality Management System (QMS) to comply with the latest requirements. Companies have until November 14, 2010 to re-certify under the new standard; if not, the existing certification will be invalid after 11/14/10. Beginning on November 15, 2009 all certifications and re-certifications, by qualified registrars, will be to the 2008 version of the standard. This does not mean that a company must wait until 11/15/09 to recertify. A company may elect to upgrade to the 2008 version at any time. If you upgrade during a normal surveillance audit, you will receive the 2008 certificate; but, with the expiration date remaining the same as the previous 9001:2000 certificate. If you upgrade during a recertification audit, then the 2008 certificate will be

issued with the normal three year expiration period.

The second thing that must be known regarding the new version is that the changes do not include any new specific requirements. All revisions were made to clarify or modify the existing standard where there was some vagueness or to update based on normal evolution of companies' methods or processes. This does not mean that companies do not have to revise their QMSs, it is recommended that each individual company investigate the revised areas of the standard to determine if this change affects their QMS. There are 14 areas that are revised for the 2008 version, these areas are summarized below.

Outsourced Processes:

- Emphasizes the need to ensure outside processes meet customer and legal requirements.
- Expects you to define the type, nature and extent to which these processes are controlled.

Documentation:

- Expands the definition of documentation to include all QMS process

records.

- Clarifies ambiguity that a single document can contain multiple procedures or several documents can describe a single procedure.
- Clarifies that only relevant external documents need to be controlled.

Management Representative:

- Makes it clear that the MR must be a member of the organization.

Competence:

- Clarifies that all QMS personnel, directly or indirectly affecting product requirements, must be competent.

Infrastructure:

- Addition of "information systems" to support services.

Work Environment:

- Defines environment as working conditions which include: physical and environmental, plus noise, temperature, humidity and lighting.

Customer Requirements:

- Clarifies "post-delivery" requirements including: warranty provisions, con-

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Training Within Industry (TWI) – What’s Old is New Again

by Philip Celotto

When a company makes the decision to pursue lean manufacturing, the intent is to be more productive, improve throughput and provide the greatest value for their customers. The most enlightened companies understand that in order to achieve these goals the culture must change to where employees are the primary drivers of improvement. Creating a culture of continuous improvement is the necessary catalyst for a successful lean transition.

The Need

Despite the widespread success of lean manufacturing, struggles can and will occur in achieving a successful implementation. Company cultures, workforce practices and management attitudes all contribute to these difficulties. The proper environment for lasting improvement exists when there is a combination of stable processes and strong leadership.

Training Within Industry (TWI) is the solution to addressing both of these needs. TWI teaches the skills of job instruction, methods improvement and leadership. It is a process for training, improving processes and improving cooperation and employee relations. The methodology results in stabilized and standardized work, consistent training and an environment where talents are used for improvements and adding value.

As with a lot of the lean work, this methodology appears to be coming from Japan. However, the true roots of TWI came from the United States and the system developed to increase factory production during World War II.

History

The Training Within Industry Service, or TWI, was developed to support U.S. industry during World War II. The U.S.

government recognized the need to assist industry to support the war effort and overcome the loss of experienced workers.

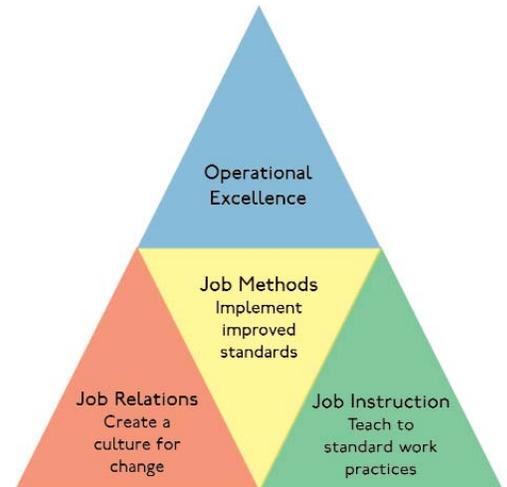
The resulting program focused on a methodology to quickly train new workers moving into the workforce. The program trained the supervisory staff on how to train operators, how to achieve work area improvements and how to deal with human relations.

The program was immensely successful in increasing the quantity and quality of output from wartime U.S. factories. Unfortunately, TWI was viewed as a wartime program and not as a permanent workplace practice. With the return of the experienced labor force and the prosperity of post-war America, the program was eventually abandoned.

At the same time it was being forgotten in the U.S., TWI was being introduced to Japan. The methodology, along with more well known quality and industrial practices, was adopted by the Japanese and became a staple of their industrial training. These practices became imbedded in the Toyota Production System so deeply they were not even viewed as a separate program. However, as the West continues to study Japan to understand the methods behind their success, TWI is drawing renewed interest today.

Defining TWI

TWI consists of three J-Programs (J = "Job") intended to provide skills for supervisors or team leaders to move into the roles of instructor, leader, advisor, fill-in, improvement solicitor and implementer. These are the skills that supervisors must possess in order for lean efforts to flourish.



JI – Job Instruction— *Quickly training employees to do a job correctly*

Ji teaches how to effectively break down a job and deliver instruction for individual tasks. The ability to deliver training in this structured manner creates the necessary conditions for process stability by standardizing the work. Standardized work defines the best known methodology for performing work and creates a baseline for improvement.

The method teaches how to prepare an operator to learn how to give a proper demonstration from a break down, how to observe the operator perform the task and how to perform proper follow-up.

JM – Job Methods – *Improving the way jobs are done for continual improvement*

JM teaches participants how to break down jobs into smaller operations. The details of each task are questioned in a systematic manner and ideas for improvement are generated. This leads to new methods of performing work by eliminating, combining, rearranging and simplifying steps. This program is directly aligned with the kaizen methodology of continuous improvement.

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Tools to Improve Your Office Continue to Evolve - Part 2 by Thomas Quinn

Starting Office-Based Projects on the Right Foot

The first article in this 3-part series emphasized two critical factors in office change initiatives — the leader's definition of success measures and their true commitment to change. Readers questioned how to demonstrate true commitment. "There's a difference between interest and commitment. When you're interested in doing something, you do it only when circumstances permit. When you're committed to something, you accept no excuses, only results." My guess is that your office is probably committed to the payroll process and is only interested in quality. Is this accurate?

John Kotter, in his book "Leading Change," states that leaders need to clarify how the future will be different and present a plan to make that future a reality. Although defining success measures does not paint the entire picture, it does give a sense for the desired changes and the problems that need to be solved. One of the most widely used problem solving methodologies is the DMAIC approach (the backbone of Six

Sigma). The five step approach includes: Define, Measure, Analyze, Improve, and Control (*see the white paper "Understanding the Phases of Six Sigma" on our website for more details*). This article will focus on some of the tools used primarily in the Define and Measure portions of this process.

One of the key concepts in the "Define" phase is the Voice of the Customer (VOC) which helps you understand and quantify value through the eyes of the customer. The VOC:

- Gathers, analyzes, and prioritizes customer needs
- Develops requirements for these needs
- Translates requirements into specifications and procedures
- Identifies gaps and defines projects to close those gaps
- Develops process controls to ensure customer needs are met

In the office, some individual and departmental incentives, along with established roles and responsibilities, have individu-

als acting in their own or their department's best interest — not the customer's. Take a look at existing procedures and start asking whether you are meeting or exceeding your customer's expectations.

Tools are available to help explore new opportunities for improvement. SIPOC diagrams highlight the relationships between the Suppliers, Inputs, the Process, Outputs, and the Customer's requirements for key processes. Looking at a familiar process represented in a swim lane or other type of flow chart will allow you to clearly see new improvement opportunities within these processes. Similarly, new opportunities can be discovered by something as simple as asking the "5 Why's."

A common misconception of Six Sigma is that it is mostly statistically-based. (*Six Sigma is about using a structured approach to determine appropriate measures and the focus they bring.*) New measures drive and create new Office Tools continued on page 6

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JR — Job Relations — *Building positive employee relations, increasing cooperation and motivation, and effectively resolving conflict.*

JR provides the foundation of positive employee relations. The development of good relations prevents problems and establishes a culture of cooperation. When problems arise JR teaches a proven method of getting the facts, weighing options, making a decision,

taking action and checking results.

The role of the supervisor, foreman or team leader has been largely ignored in the efforts at lean implementation. In a lean environment supervisors need to be mentors and instructors and the primary support to help staff execute ideas for improvement. The JR module provides training for supervisors and leaders to handle this role.

The TWI program provides process stability and goes a long way toward creating a culture of continuous improvement.

These issues are critical to the short and long-term success of any lean implementation. If your company is facing these types of issues, perhaps TWI training would be the right solution for you.

Philip Celotto is an Insyte consultant with over 24 years of manufacturing and engineering experience. Mr. Celotto is a Lean Bronze Certified practitioner by SME/AME and is a trainer in lean initiatives. He is an ISO 9001:2000 provisional lead auditor and an ISO:TS16949 lead auditor. ❖

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tractual obligations (maintenance), and supplementary services (recycling, final disposal).

Design and Development Planning:

- Maintains that review, verification and validation can be done separately or in any combination as it makes sense for the product.

Design and Development Outputs:

- Adds a statement that design and development outputs could include information regarding preservation of product during production and service.

Monitoring and Measuring Equipment:

- Changes term from "device" to the more specific "equipment."
- Adds a statement suggesting that software used to monitor and measure have configuration control and have an established verification method.

Customer Satisfaction:

- Adds a note to show examples of how to measure satisfaction: surveys, post delivery quality, warranty claims, customer complaints, etc.

Internal Audit Records:

- Explicitly states that records of audit activities and results must be maintained.

Process Monitoring and Measurement:

- Adds a note suggesting you consider each process impact on the effectiveness of the QMS and its impact on the organization's ability to meet product requirements.

Release of Product:

- Clarifies that products are released for delivery to customers, not for general release. Records must show who released the product for customer delivery.

If you need further help in interpreting how the new standard may affect your company, please contact Insyte Consulting and one of our trained lead auditors will assist you.

James Johnson is an Insyte consultant with over 25 years of diversified manufacturing experience. Mr. Johnson is an ISO 9001:2000 provisional lead auditor, an ISO:TS16949 provisional lead auditor and a trainer in lean manufacturing initiatives. ❖

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questions. In turn, these questions drive new behavior. As behavior changes and

Six Sigma Training

Green Belt — \$2,100
(40 Hours)

Black Belt — \$3,000
(80 Hours)



Contact Insyte Consulting at
716.636.3626 for further
information.

questions are answered, ambiguity diminishes. As ambiguity diminishes, direction becomes clear. When direction becomes clear, people more effectively work towards the established vision or goal.

As an example, researching a customer complaint of, "I hate filling out this order form," can determine that it takes too long (*from their perspective*) to fill out. Establishing that the form needs to be filled out in less than five minutes may become the success measure and starting point for Analysis. As I stated in the first article, I sometimes would get distracted and focus more on the obvious wastes of the order taking process and less on meeting or exceeding the customer's expectations. Starting the project by focusing on reducing the order taking time versus "fixing" the order process significantly increases the likelihood that customer-valued changes will occur.

The DMAIC methodology, supported by Six Sigma and lean tools, can help determine new solutions to old problems and quickly lead to customer-valued changes. You, the leaders, need to establish clearly defined success measures which support your change vision. Selecting the right tool to use or what data to collect can be confusing. Please contact us if you are struggling with getting your office started down this path. The last article will focus on the three remaining steps of the DMAIC process and some of the tools most commonly used during these steps.

Thomas Quinn is an Insyte consultant with over 20 years of experience in the technology field. His strengths and expertise lie in strategic business decisions involving IT-related systems and equipment and the ability to provide proven tactical plans supporting the vision of an organization. ❖

Tyson Foods continued from page 1

intended to address process waste. It was determined that eight individuals covering both production shifts would be trained and certified as Six Sigma Green Belts in order to facilitate the introduction of Six Sigma into the organization.

Due to its hands on approach, Insyte Consulting was selected over several other vendors to provide the training for this initiative.

“The Six Sigma approach takes ‘gut feel management’ out of the process...”

Ken Murray, Plant Manager

The Green Belt training was provided in weekly classroom sessions. One of the requirements of Green Belt certification is the successful completion of a project using Six Sigma principles. Tyson Foods identified four areas where they were experiencing cost or waste issues that would be addressed by the eight trainees in a partnering approach. The four areas selected were:

Slicing Yield: Packaged cold cuts are sold based on weight, e.g. 12oz. packages. All packages must meet the minimum stated weight. However, typically the packages exceeded the minimum weight thus representing increased cost and lost revenue to the company. This project focused on eliminating the variance and increasing the yield for this issue referred to as "give-away." It was considered to be particularly significant since the company packages about 300,000 pounds in a typical week.

Kitchen Scrap: This problem is defined as product that is thrown out due to changeovers and other activities. The group focused on reducing changeover time that increased yield, reduced scrap and improved overall machine effectiveness.

Ham Throughput: Processed hams are produced through a process that includes both pumping and blending material through the equipment. It was believed that there were opportunities for increased efficiency, particularly through improved changeover techniques.

Shape Defects: Tyson Foods has stringent

standards for the shape and appearance of its processed hams. The ham muscle is placed in a bag and inserted into a mold and subsequently baked in this area. There was significant yield lost since the finished hams

often had shape deformities that would not be acceptable for retail sale.

The teams actively evaluated the problems and developed solu-

tions based on the Six Sigma principles and techniques presented in the formal training. Significant progress was made in resolving the above problems with the direction and guidance of the Insyte Consulting instructor.

Results

“The Six Sigma approach takes ‘gut feel management’ out of the process. It puts in the required disciplines that take the focus off of people and onto the processes and specific situations. Insyte Consulting’s hands-on approach enabled us to effectively make this transition and lay the foundation for an expanded Six Sigma program at Tyson Foods,” said Plant Manager Ken Murray.

All eight individuals received their Green Belt certification. In addition, Tyson Foods realized significant improvement in product yield and waste reduction due to the successful completion of the projects. Conservatively, the anticipated impact from the first year alone is over \$300,000. The slicing area in particular has experienced significant impact estimated at over \$140,000. Kitchen scrap has been reduced by \$90,000 and ham yield has increased by about \$70,000. In addition, the Green Belts are continually attacking additional process improvement opportunities where Six Sigma principles can be applied. Tyson Foods' management has recognized the success of the project and is committed to further expanding it. There are plans to add more Green Belts and/ or Black Belts in order to realize further gains in the near future. ❖

Benefits of Six Sigma Green Belt Projects

- Six Sigma Green Belt certification received by 8 individuals
- \$300,000 anticipated impact in product yield and waste in first year
 - >\$140,000 impact in slicing area
 - \$90,000 reduction in kitchen scrap
 - \$70,000 increase in ham yield
- Green Belts continue to find process improvement opportunities



Coldcuts are sliced and packaged on automated line at Tyson Foods.



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ly reflect the views of NYSTAR.

Principles of Lean Manufacturing

Join Insyte Consulting for a fast-paced, information-packed session that will show you how to reduce costs, speed up delivery times and improve quality in your manufacturing operations.

Date: Wednesday, June 3, 2009

Time: 8:00 AM - 4:30 PM (coffee & networking 7:30 AM)

Site: LCo Building, 726 Exchange Street,
6th Floor, Barton Room, Buffalo NY 14210

Cost: \$250.00
(includes lunch & training materials)

For more information or to register visit
www.insyte-consulting.com or call 716.636.3626.

Special pricing available for new clients — call us for details

This interactive workshop introduces the basic concepts of lean manufactur-
ing and demonstrates the tools and methodology necessary to implement
“lean” on the shop floor by combining a comprehensive classroom presenta-
tion with hands-on simulation of a production facility. ❖

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