

Improvement Initiatives

Change – for the better

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FREE NEWSLETTER

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**"Quality is free -
however,
the management
systems that proliferate
it are not !"**

- Jay Watson



The real goal of Six Sigma

by Jay Watson

A textbook says six-sigma is a popular operational improvement methodology and toolset for cutting costs, improving processes, and reducing business cycle times. It is also a statistical unit of measurement that reflects process capability. The sigma scale of measurement is correlated to such characteristics as defects per unit, parts per million defective, and probability of a failure or error.

With defined roles as Champion, Master Black Belt, Black Belt, and Green Belt – six sigma is executed with rigor and discipline. Problem solving phases include: Define, Analyze, Measure, Improve, and Control.

WOW ! *but – what is the goal of all this?*

Let's pretend to be Tiger Woods for a minute...

Placing the ball on the tee, you notice the trees (firmly set in the ground) to the left and the trees (firmly set in the ground) to the right. Your task is the hit the ball straight down the middle (an imaginary centerline) as close to the hole (target) as possible every single time you execute (tee off). That is the process you must understand and improve on to remain world champion. *(hint)*

You've noted that sometimes the balls veer naturally left a little or sometimes they veer right... If the wind blows, a little adjustment might be necessary in the process.

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Business Goals Drive Training Needs (Part 1 of 3)

by Jay Watson

Whether your objective is to conduct product training, to provide "renewal" training, or to train for a new skill – the goal of the operation (business unit) should be developed first. Questions to be considered when thinking about the need for training include:

> How will the training enhance safety, improve performance, impact quality, or reduce costs?

> Is the training needed to prepare employees for a promotion?

> Is there a need to improve the handling and flow of materials to overcome production bottlenecks?

> Is the goal to reduce accidents and increase safety practices?

> Is the training needed to ...

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True Effects of Safety

Improved safety performance means more than going home safe each day; it also means improved productivity, reduced manufacturing costs, and a better place to work for all of us.

In addition to reducing injury measured by Total Recordable Accident Rates (TRR), leadership emphasis should also focus effort on reducing Lost Time Accidents or (more severe) Lost Work Days.

Lost days could result in late shipments, increased costs, reduced product quality, and eventually dissatisfied and/or lost customers!

Real Goal of Six Sigma ... (continued from page 1)

From center fairway, you decide to divide the total distance between the trees into 12 standard (equal) parts - six to the left of the center line and six to the right of the imaginary line - so you can track how often the balls go left or right and how far they deviate (either way) from the center line.

Based on swinging at the balls a long time (aka process knowledge) you note that most go down the middle and a few go just a little either way - left or right. Occasionally, usually due to some "special" cause, a ball flies into the trees. Corrective action is required to get it back into "play" (in the process) and preventive action also - so it doesn't happen again. (aka, *mistake proofing*)

After a while, and with considerable study, you discover the key factors that control this process. And constantly monitor and adjust ever so slightly to

keep it perfect... get little white ball down the middle and really close to the hole! In fact, on most holes, you know the process inputs (aka variables) so well, you can predict with some certainty the outcome (where the ball will land).

So, with all the roles, statistics, terms and problem solving models aside, the real goal of six sigma is to improve the process (and understanding of the inputs into said process) so that the ball goes down the middle, away from the trees (aka *spec limits*), and really close to the hole 99.99996% of the time. In other words, out of a million swings, only three and half (?) balls will hit a tree. (aka *error*)

Now I don't know what Tiger knows about "six sigma," but I bet his goal is to continually improve his process so that he understands how to win with it.

What is your six sigma goal?

We Did 3 Kaizen's a Week, You can too! (Part 2 of 2)

Case Study by Jay Watson

A "Kaizen Hopper" or list of potential improvement projects was developed and each week at the Site Operation Manager's staff meeting, department Managers presented their case to move their event up on the schedule - spacing it within the 2-week planning outlook. Movement depended on upcoming Customer visits, safety or government audits, schedule changes in customer demand, labor loads, production plans, quality problems or material availability.

Once a team (actually 3 concurrently...) queued up Monday morning, the day proceeded with a standard 'lean thinking training' module, then investigation of each process/ problem.

Phases for Monday and Tuesday consisted of data gathering, process or value stream mapping, identification of undesirable observations (UDO's), analysis of potential improvements, and some level of discernment for what improvements could actually be accomplished within the week. Wednesday and Thursday, teams went about making and monitoring change. Operation managers and the LPO belts conferred with Kaizen leads each day to check progress and keep the scope small.

Many times other improvement projects were uncovered as the Kaizen team conducted their process analysis work. These were shared with the leadership team and be added to the hopper.

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Know, Show, Do and Review (Part 2 of 2)

"Teachable Hour" Training Model designed specifically for Adult Learners

Know:

This first section is typically a very short lecture with the instructor introducing new subject matter to participants or reviewing 'pre-reading' assignments. Boring power point slides are the common form for this information dissemination. In fact, they have become so commonplace in teaching today that participant boredom may set in quickly – especially if the facilitator begins reading the slides verbatim and adds no personal examples or real-life application to the subject matter. For this reason, time for this activity should not exceed 10 minutes and group participation/ facilitation should be the instructional mode, if possible.

Show:

I have participants do something (work an exercise etc...) with a partner within the first 15 minutes of class because adults come to training anxious to learn. They want to try something right away – not just sit there and listen to a dry lecture from an instructor reading from the book that he/she wrote. This is also a good 'ice breaker' for new participants. Again, facilitate the groups and check for learning. If a little more explanation is required, a 'quick' mini-lecture may be appropriate for another 5 to 10 minutes. Sometimes I have participants share (show), if the application is relevant.

Do:

Later, I have them do actual work within small groups of 3 to 5 to begin building team trust. A case-study or multi-faceted problem may take 20 to 30 minutes to review and another 10 to 15 minutes to report-out. Time constraints force multi-tasking and management of

team progress. Also, this stage of the model helps participants incorporate new knowledge with existing skills – reading, note taking, assimilating technical information, working together to accomplish a deadline, and preparing information for explanation to others. These kinds of activities have become vital skills in most work settings today.

Review:

Summarizing and linking information to other concepts is accomplished during this final stage of the model through group facilitation techniques or a written review. Application teaching should, ideally, be integrated within at least 50% of the 'teachable' hour, but the facilitator should always strive for more like 75% of the total. For today's adult learner, real world application is everything!

I have also allowed participants to write tests or teach materials, if so inclined, in lieu of a written exam. *(If you really want to learn something... teach it.)*

I explain this model to my students. It serves to help participants open up to the learning process and begin to learn, not only from me, but from each other.

Because everyone learns differently, educational events should also be peppered with several teaching methodologies. The instructor should share a class schedule with the students so they know what to expect. In addition, if students are aware of this information, they are more likely to become "active participants".

Never forget, it is their event, not yours.

Benchmarking

- comparing a process, using standard or best practices as a basis

Identify benchmarks:

Consider competition, which has target processes performing better than yours do?

Find out through:

Media reports, internet research, annual reports, professional societies, trade associations, white papers, technical journals, conference presentations, or panel discussions, investigate materials from supply partners. or even advertisements.

Most direct:

Contact companies and conduct site visits.

Reciprocate and host a benchmark tour at your facility as well.

Partnership/ communication effect can result in successful transfer of knowledge for an enhanced process.

**5 seconds
on
5S**

SORT

Get rid of the
"junk in da trunk!"

SET in ORDER

Put the useful
stuff back where
you can find it

SHINE

Inspect and
clean area daily

Standardize

Label where
things go

Sustain

Take pride,
pitch in
and

Show Off !

Training Needs continued ...

introduce a new production or quality standard?

> Is the training for procedural or "compliance" requirements?

> Are there particular skills and techniques that trainees must learn?

> Should the course establish methods that employees should use to avoid waste or spoilage?

> What particular performance standards must be met?

> How is the impact of the training going to be measured? For how long?

After the objective is clear, the subject matter should be explored. Determine what kind of training is needed in terms of individual job duties and/ or group responsibilities.

See if more information on the product or service would be effective and if employees need instruction about departments other than their own.

Next time... detailed delivery elements

3 Kaizen's a week (continued from page 2)

Teams assembled and practiced their presentation and at 11:00 every Friday, three or four teams would present their accomplishments. All of the operating staff management - consisting of Safety, HR, Maintenance, Finance, Quality, Materials Management, Production and Inventory Control, Manufacturing, and Manufacturing Engineering - attended. At the conclusion of each 15-minute presentation, every Kaizen member received a framed, personally signed certificate of appreciation from the site manager. Lunch was provided for all.

The best team member during the month, out of twelve teams, received \$200 cash award and the best team (sustaining results for three consecutive months) received a free lunch by the LPO staff and \$500 for each member.

After 10 weeks of sustainment, 30 events total, a little over \$2.1 million (USD) was realized in waste reduction, productivity improvement and cost savings.

(Each Friday afternoon, the LPO office prepared three more teams for Monday...)

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