

A publication of Improvement Initiatives LLC

Special Interest Articles:

- 'Certification' vs. Doing 1
- Certifying Agencies 1



'Certification' puts Learning to Task

"Six Sigma practitioners have come from the likes of GE, Allied Signal, Motorola, Six Sigma Academy, etc.

Being 'trained' in Six Sigma is much different than being certified from Allied Signal or GE, for example.

Frankly ASQ missed the wave, for example-- entered the party late - and unlike most of the other quality movements, not considered the authority institution in the field. The methodology is owned by the community.

It takes several years of real life experience to be accepted as an expert by the community.

Just like becoming a Doctor - the real learning in the education cycle comes from the doing piece, not the reading."

Opinion by Steve Darrish

Ed. note: With 35+ years in Mfg., couldn't agree more!

I think that plays a factor in the overall lack of understanding and lack of adoption by Universities.

Individual Highlights:

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**Get your practical experience, then get certified ...
ASQ and SME offer professional certification(s)**

American Society for Quality [ASQ]

<http://asq.org/certification/index.html>



Society of Manufacturing Engineering [SME]

http://www.sme.org/cgi-bin/cerhtml.pl?cert/lean_certification.htm&&SME&

Learn about the advantages of certification here:

http://www.ehow.com/list_6572575_advantages-six-sigma-certification.html



Helpful Hints

Reduction of Assembly time reaps several Benefits

- Reduced assembly cycle time by 60% from 16 days to 6 days
- Reduced standard lead times by 30% from 12 weeks to 8 weeks
- Streamlined process flow by eliminating 6 process steps
- Improved product quality through parts compatibility
- Fewer defects resulted in lower COPQ
- Fewer steps resulted in Safer operating conditions

Contact Jay Watson for a full report-out of this project ...



Free Lean Enterprise Videos and Presentations !!

A quick video with great tips to organize a 'Waste Walk' (MUDA) in any setting.

<http://www.lean2020.com/tools.html>

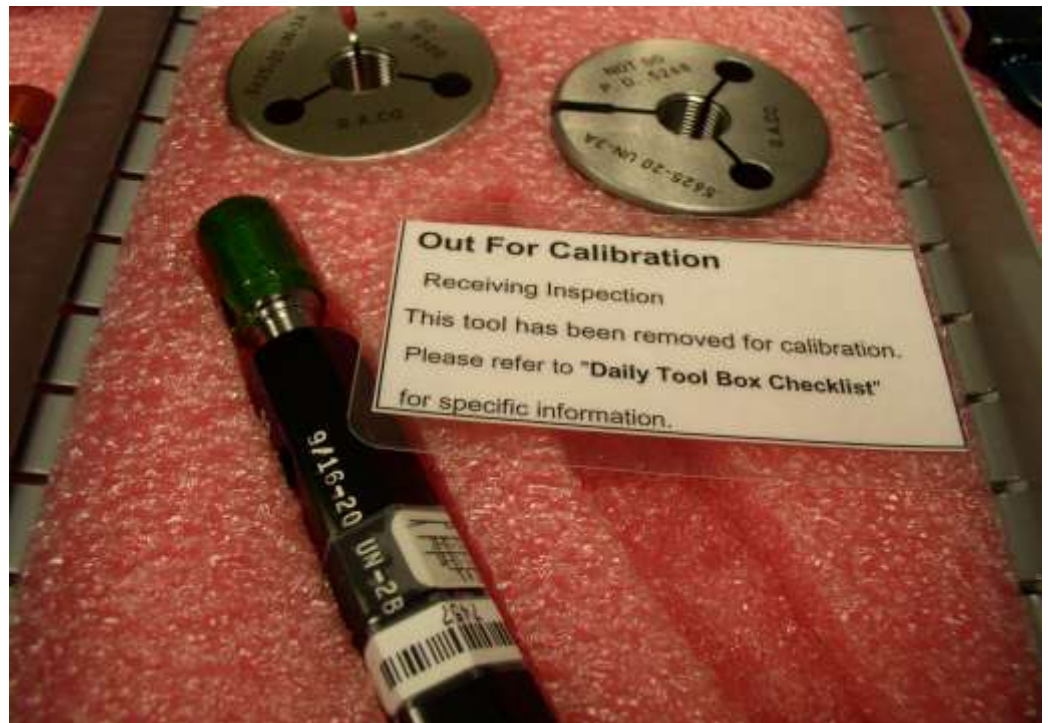
Contact Jay Watson for a 'MUDA Walk' project application and lessons learned.

More videos at: <http://leansimulations.blogspot.com/p/equally-massive-list-of-free-lean.html>

Also, check out these Lean presentations: <http://www.tocforme.com/mainlean.html#kaizen>

5S / Visual Management / Tool Control work together

Kanban card explains empty location in shadow board within the toolbox drawer



Tutorial: Establishing Cell / Dept. / Area Communication Boards

Status boards developed as part of Visual Management efforts

Productivity expectation - Activity by the hour or day or week may be utilized. Expectations of (goal) output should be posted and (actual) performance tracked. Each team member should know what is expected of them everyday.

Drawing a Blank - Leave a white board and dry marker available for any instant communication needed with teammates.

Continuous Improvement (Problem) Log - Post an action list and corrective action log for problems and delays that occur during the shift.

Safety - The safety (green) cross with numbers 1 through 31 serves as a daily reminder that safety awareness and prevention is everyone's responsibility. Color square green if no problems. Red, if occurrence - then track corrective and preventive actions. (Also, inform Safety Office and Site Leadership...)

Key Performance Indicators (KPI's) = Pulse of the Factory

Incorporate a board walk (review) in the 'start of shift MUDA walk' performed by members of the leadership team. Also, conduct AM and PM "huddle" meetings, each shift, with associates around the boards to discuss performance status; ideas for improving; and corrective/ preventive actions required.

Rotate leadership roles with the team. Hold people accountable.

Communication boards should be living, breathing tools of the trade, not pretty displays for 'show and tell' during a Corporate Audit. They can have schedules and working drawings posted up with dirt and grease on them!

Anyone coming up to the board should be able to determine current operating conditions within 2 minutes.

Metrics could include: (Choose those important to the business.)

- Safety (Days lost/ Incidents/ Near misses/ Concerns etc)
- Quality (Scrap/ Rework/ dpu/ dpmo/ Cp/ CpK et al)
- Speed – OTD; late shipments
 - (Special Issues – Hot Jobs, Customer emergencies)
 - Labor contribution/ Overtime/ Downtime
 - Distribution/ Planning/ Execution/ WIP
 - NC Programming Status
 - Purchasing Issues/ Inventory Shortages/ Expedites
 - Continuous Improvement Ideas
 - Supply Chain delays/ Supplier Performance problems
 - Bookings/ Shipments/ Invoices

On the Business Unit level ...

Safety

The standard metrics of accident/incident frequency and severity are sufficient.

Quality

What is meant by quality will vary by company, but it must be quality in the eyes of the customer. As a result, customer returns or warranty claims are typically the basis for this business unit metric.

Speed (Delivery performance)

Delivery performance is the percentage of customer orders shipped when the customer requested them to be shipped. It should not be modified to accommodate company policies or shipping promises. It is purely a metric of manufacturing's ability to meet (internal or external) customer requirements.

CLICK HERE for Manufacturing's 5 'Golden' Metrics

<http://www.sme.org/cgi-bin/get-newsletter.pl?LEAN&20061010&2>



Here's more 'Communication' Info:

<http://6sixsigma.com/index.php/Six-Sigma-Articles/Communication-Plan.html>



Another way to Improve: Theory of Constraints (TOC)

Discover more TOC info at:

<http://www.tocforme.com/>

Theory of Constraints (TOC) is based on the premise that the rate of goal achievement is limited by at least one constraining process.

Only by increasing flow through the constraint can overall throughput be increased.

Assuming the goal of the organization has been articulated (e.g., "Make money now and in the future") the basic steps are:

1. Identify the constraint (the resource or **policy** that prevents the **organization** from obtaining more of the goal)
2. Decide how to exploit the constraint (get the most capacity out of the constrained process)
3. Subordinate all other processes to above decision (align the whole system or organization to support the decision made above)
4. Elevate the constraint (make other major changes needed to break the constraint)
5. If, as a result of these steps, the constraint has moved, return to Step 1. Don't let **inertia** become the constraint.

The focusing steps aim to ensure ongoing improvement efforts are centered on the organization's constraints. In the TOC literature, this is referred to as the "Process of Ongoing Improvement" (POOGI).

Learn more at: <http://www.answers.com/topic/theory-of-constraints>

Value Stream Analysis: critical step in the identification / removal of waste



'critically evaluate each step or activity to truly determine value add defined as ...

- 1) *Transforms product or service to finished state*
- 2) *Performed without error*
- 3) *Customer willing to pay for the step/ activity'*

Results from On-site Supplier Development (OSD) Project ...

LEADTIME:

After value stream mapping each step on two major production flows, extensive analysis was conducted with production and quality personnel. Changes were made and waste eliminated.

After, the quoted lead times for delivery to Customer (Honeywell) went from 80 hours to 41.77 hours on first line and from 40 hours to 35.5 hours on second line, resulting in savings of approximately \$79,000.

SUPPLIER SUGGESTIONS:

Through the evaluation of the fabrication steps with process engineering - sequence modification, timing, and technical and test changes (process improvement) accounted for \$104,950 in savings.

NEW DESIGNS:

Qualified product accounted for \$97,000 in cost reductions because of efficiencies in processing times.

TRAINING:

Additionally, a Six Sigma Green Belt and Black Belt were qualified after several projects.

GOING FORWARD:

At one year operations review,

95% OTD was achieved for major Honeywell deliveries.

PPM was reduced to fewer than 750.

Transition plan established to consolidate and move additional transducer work to this supply partner with a 3-year long term agreement (LTA) realizing savings of \$1,067,000.00 (USD) over existing Honeywell suppliers.

Contact Jay Watson for a complete project report-out of this Lean Six Sigma project.

Learn more about Kulite at:

<http://kulite.com/home.asp>

Checkout the Value / Flow Analysis module at: <http://www.freeleansite.com/training.html>



Planning successive Kaizen events proliferate a "betterment" process

Questions?? Contact Jay Watson for more information on these projects focused on Visual Management and Standard Work (SW) ...

KAIZEN #1 – Teams working part-time within a Machine Shop operation w/ production on-going ...

- Necessary and unnecessary items have been identified.
- Those items not needed have been removed for the area.
- Needed items have been outlined.
- Designated locations have been established and marked. Tool control system in place.

KAIZEN #2 – same area (2 weeks later)

- Workplace areas and machines cleaned on regular basis and scheduled posted.
- Cleaning is part of everyday work.
- Foundational TPM system in place.

KAIZEN #3 – same area (1 month later)

- Workplace agreements developed, posted, and being followed and audited. (Visible standards.)
- Process in place to maintain standards for Sort, Store, and Shine.
- Ownership of standards embedded in Leader's Standard work.

KAIZEN #4 – same area (another month later)

- Key information and area/ cell communications board established.
- Process in place to maintain standards for Standardize and Sustain.
- Standard work created for 5S adherence and for each individual work center within the area.



*LEAN LEADERS ASK:
"Is it better than it was before?"*

• VISUAL DISPLAY / VISUAL CONTROL

Each metric should be applicable to the team. An easy color code will determine winning or losing 'at a glance'.

Posted metrics lead to ...

Increased visibility, which leads to ...

Root cause analysis (when indicators stray), leading to ...

Proactive countermeasures and control plans.

A layered process audit system should also be incorporated involving independent third parties.

"Without standards, there can be no Kaizen (improvements)." -Taiichi Ohno

Visual Management is the use of controls that will enable an individual to immediately recognize the standard and any deviation from it.

Learn more: <http://www.shmula.com/no-standard-then-no-kaizen/2035/>



Lean and Six Sigma are just the beginning at Precipart



SQS 1 - Safety

Material clutter and unused items were evident at this Honeywell supplier – a precision machine shop on Long Island, NY. Office areas were messy also, so several improvement projects were managed concurrently, during a 13-week On-Site Development effort. (Honda OSD model)

A plant-wide 5S plan was developed and area teams trained each week in 1-hour sessions. ‘As-is’ condition(s) were captured with photos and posted.

The entire facility was cleaned and organized. After 3 months, a dumpster full of unwanted items was filled.

Visual workplace signs were fabricated and installed and a monthly 5S audit schedule was established. Results discussed in Safety meetings.

Because of 5S and P.O.U. (fixture/ tooling availability), change-over and set-up times were reduced by 1 hour, on average, on 5-axis machines.

SQS 2 - Quality

The goal of Precipart Corporation is to continually improve our products with a commitment to establishing quality goals that comply with customer requirements, maintain and continually improve the effectiveness of our quality management system and be recognized as the finest provider of motion control solutions.

Unnecessary toll-gate inspections were identified in the value-stream maps and analysis of rejection data.

Quality improvement teams focused on critical factors controlling boring, drilling, and turning variation and eliminated 4 Q.C. visual inspection steps.

These efforts contributed in the reduction of total cycle time from 65 to 55 days for several major product lines.



SQS 3 - Speed



After analysis of the quotation development and Purchase Order process flows, administrative teams were established in the front office.

Due to numerous steps and batch processing, it took 18 days (worst case) to convert a Purchase Order into a Manufacturing release.

Training was conducted to eliminate non-value added steps and implement controls through directed automation on repeat orders.

Results: 3 – 5 days (avg.)

Review complete Project details with Jay Watson.

Call him at: 480-820-0877
www.freeleansite.com

Learn more at: <http://www.precipart.com/continuousimprovement.html>



HIGHLIGHTING HONDA: ‘Successive Improvement’

<http://www.hondainthenews.com/failure-may-be-secret-to-honda-success/>

<http://www.bizjournals.com/louisville/news/2011/06/28/honda-toyota-top-american-made-cars.html>

Honda's supplier development specialists recognize the importance of implementing operators' suggestions.

In one of its supplier plants, an operator who had to bend over to use a light board for inspecting switches suggested it would be easier if the light board were at a 45 degree angle. So during lunch that day the development team installed a stand to hold the light board as she suggested.

When the operator came back from lunch, "she was so happy she almost cried."

Employee involvement in process improvement can have other benefits as well.

In one plant, absenteeism dropped from 14 percent to 4 percent after the supplier development efforts got under way.



Aiming for 120% Product Quality ?

http://world.honda.com/CSR/pdf/2008/e_csr08_6.pdf



Attention GM ... a car built, with Quality, in the USA!
 (... long-lasting products that Customers *want* to buy.)

Click on the top American made cars link above.

Do you “honor” your Supply Partners?

“... support of these suppliers is critical to the success of American Honda and we are honored to recognize them.”

<http://www.honda.com/newsandviews/article.aspx?id=5659>

Goal is to provide Joy:

http://j-net21.smrj.go.jp/expand/kokusai/oced/plenary_session/aoki.pdf

Honda History {A Case Study}:

<http://dspace.mit.edu/bitstream/handle/1721.1/1455/165a.pdf;jsessionid=2FF75D4233EDAA3CD463F46A66C510F3?sequence=1>

Learn more on Supplier Development at: http://findarticles.com/p/articles/mi_m1038/is_n4_v39/ai_18485576/

Contact Jay Watson for the Honda On-site Supplier Development (OSD) implementation model ...



Projectz! LSS In Action

E-mail:
improvementinit@yahoo.com

Phone: (USA)
1+ 480 820 0877

Improvement Initiatives LLC
Projectz!
Managing Editor, Jay Watson
2135 e. La Jolla Drive
Tempe, AZ 85282

Employ
Improvement
Initiatives!

We're on the Web!

Visit us at:

www.freeleansite.com

“OpEd” -

Continuing Improvement means Continuing Ed. (If you're not reading, you're not leading ...)



Jay Watson
Learn, Share, Grow

Spend an hour a day, reading a new book or journal on productivity, or searching the internet on a new subject, or leading, reviewing, and participating in an industry blog.

If you need ideas, spend a lunch hour walking a local Mall and just look at the window displays, keeping a keen eye open for something brand new. Attend a benchmarking event in your city or state. Give a talk or teach a college class. Do a ‘stand-up’ routine in L.A.

Just do something, or you will atrophy.

For my part, I produce this Newsletter and webpage and I really hope you can walk away with one new idea or application. A tool, technique or new approach - something that sparks your thought process on improving.

Now, would you share this newsletter with friends and colleagues? It's the only LSS project publication of its kind available – *free!*

Hope it helps.



**“When you come to
a fork in the road,
take it!”**

-Yogi Berra

<http://www.yogiberra.com>

CLIENT NAME
STREET ADDRESS
CITY, STATE 12345



About Our Approach ...

This lean site provides free project management information, speeches, seminars, newsletters, training materials, articles, data collection forms, audit checklists, and web-based sources for uncovering process waste, reducing non-value adding activity, enhancing safety, improving quality, and increasing productivity.