

A publication of Improvement Initiatives LLC

## Special Interest Articles:

- Meeting Expectations 1
- Most Meetings = MUDA 1



## Meeting Expectations

### Do your meetings start and end on time?

On our lean journey, we sometimes overlook the simple and obvious waste.

Take meetings for example. How many of your meetings start and end on time? For the past

several months, I recorded the FPY (First Pass Yield) rate of meetings starting on time that I attended ending up with a poor 0% FPY rate. Not one meeting started on time and very few ended on time.

How much muda (waste) is accepted in your companies on a daily basis just because we

can not start and end meetings on time. Is this problem just too complex to solve or do we just accept this waste as a by-product of doing business today?

Of course, we should eliminate all unnecessary meetings as a first step. Then demand, encourage, reward, promote, and expect all meetings to start *and* end on time.

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### Most Meetings = MUDA

Statistics from Meeting Planners International tell us that there are eleven million meetings held every day. Change the culture, cancel the meeting.

If you have to conduct a meeting:

1. Call a meeting only when absolutely needed.
2. Keep meetings to an hour or less.
3. Follow a pre-published Agenda.
4. Demand accountability on action items that drive results!



Life before the "Blackberry" ...



Check out more tips in Jay Watson's "[Six Steps toward a Lean Management Mindset](#)" at: [www.freeleansite.com](http://www.freeleansite.com) (click Letter Pile tab... look under 'Lean Learning')



*Ed. note - At the end of the day, it's about betterment: customer satisfaction, project completion, and results! These are typical results when an organization drives Lean Thinking throughout Operations.*

### **Makin' the "Needle Move": Lean Analytics (A sample)**

**These before-and-after metrics reflect the success of Continental Lean Manufacturing workshop training and consulting. Due to Confidentiality Agreements the company names are not included, only the locations of the manufacturing facilities. Learn more at: <http://continental-design.com/lean-manufacturing/success-stories.html>**

Lincoln, Nebraska

Metrics	Mass or Batch	Production Lean Manufacturing	Improvement
Production /Operators	2000 / Shift 8 Operators	2,667 / Shift 6 Operators	44%
Work in progress	10,716	20	Nearly One Piece Flow
Floor Space	480 FT	214.5 FT	70%
Production Lead Time	3.0 Hours	3 Minutes	98%

Rotor Re-Manufacturer, Oklahoma City, Oklahoma

Metrics	Mass or Batch	Production Lean Manufacturing	Improvement
Production /Operators	7200 / Day 121 Operators	7200 / Day 78 Operators	36%
Work in progress	4618	2909	37%
Floor Space	10,540 FT	5670 FT	46%
Production Lead Time	11.54 Hours	6.16 Hours	47%

Oklahoma City, Oklahoma

Metrics	Mass or Batch	Production Lean Manufacturing	Improvement
Production /Operators	2918 / Day 56 Operators	3648 / Day 48 Operators	31%
Work in progress	6541 pcs.	2234 pcs.	66%
Floor Space	16,250 FT	12,000 FT	26%
Production Lead Time	2.25 Days	.62 Days	72%

Electrical Connector, Nogales, Mexico

Metrics	Mass or Batch	Production Lean Manufacturing	Improvement
Production /Operators	1700 / Shift 11 Operators	4518 / Shift 9 Operators	76%
Work in progress	2067	53	97%





## Watch out Mr. Roadrunner, ACME anvil improved!

This project was selected because meeting customer on-time delivery, to their request date (OTTR), is one of the key drivers for exceeding customer expectations and gaining a larger percentage of the Company's parts and service market.

Company's on-time delivery average for 200X was 78%. An analysis of the inputs affecting their on-time delivery revealed that castings supplier (ACME) performance was one of key drivers.

From April 200X to April 200X Acme Castings on-time delivery to Company averaged 68%, with a range from 44% to 90%, resulting in customer dissatisfaction.

Team Objective April 200X: Improve Acme Casting on-time delivery to Company from 68% to 90% by October 200X, resulting in improved customer satisfaction.

Because this is an on-time delivery improvement project it is difficult to identify specific cost savings or revenue generation. We do know that meeting customer on-time delivery is a key to gaining a larger share of the Company's parts and service market.

Other benefits include:

- Improved customer satisfaction
- Reduced overtime in the Machining Center
- Reduced expediting costs
- Reduced premium freight charges
- Opportunity to capture greater share of parts and service market

Through direct observation:

*Process maps reveal opportunity to streamline process workflow!*

- 12 VA activities
- 7 NVA activities
- 19 NVA (necessary) activities

The top six controllable inputs account for 80% of the impact on the output:

- #1 Core & Mold 25%
- #2 Patterns 15%
- #3 Chemical & Physical Testing 14%
- #4 Order Entry 11%
- #5 Heat Treat at Outside Vendor 8%
- #6 NDT Inspection 7%

Through extensive PFMEA and the Effort / Impact analysis, team developed 17 actions items for short term resolution at ACME (supplier) and 2 improvement initiatives at the Company.

Solution sets included:

**Foundry Pour Schedule** - Developed and implemented foundry pour schedule to manage the foundry melt and pour process based on material types, pour weights, and customer requested delivery dates.

### **Emergency Order Processing**

**Procedure** - New procedure developed and implemented to process emergency orders within 1 – 3 weeks.

### **Casting Procurement Checklist**

New procedure developed and implemented. The Company casting buyers will use this casting procurement checklist form as a guideline when requesting a casting quote, or for purchasing castings.

**Order Entry** – New procedure written and implemented to ensure orders are entered timely.

**Work Order** – New procedure written and implemented to ensure work orders are generated timely.

**Pattern Storage** – New procedure written and implemented to ensure inventory system is correct and patterns can be located quickly.

## Project Success:

- **Eliminated 7 non-value added process steps**
- **Improved On Time Delivery in 90 days from 68% to 83%**
- **Maintained Quality level at 87%**
- **Implemented 17 process improvement initiatives at Acme Castings**
- **Implemented 2 process improvement initiatives at the Company**



Check out this Project Report-Out and other Lean Six Sigma case studies at:  
[www.freeleansite.com](http://www.freeleansite.com) (click Letter Pile tab... Report-outs and Case Studies)



## Standard Work Developed for Material Replenishment Process

### Problem Statement:

- XYZ focus factory has averaged 42 hrs/week of lost productivity from January – February 200X. This caused missed deliveries and unnecessary overtime. During this time frame the on-time delivery was averaging 80% with overtime per person at 15%.

### Objective:

- The objective for this project is to reduce productivity loss in the XYZ Focus Factory by 35% and increase dollars produced per employee by 10%.

### Business Impact:

- Annualized savings of (USD) \$26,910 in labor cost.



### Results:

- Reduced productivity loss from 42 hrs/week to 20hr/week.
- Also increased dollars produced per employee by 12%.

### Conclusions:

It was found during the brainstorming session and confirmed during the first steps of the project, that there was no formal process material replenishment for the assembly lines which turned out to be one major cause of down time and loss of productivity:

- A formal-documented material replenishment system had never been put into place to ensure material availability on the assembly lines.
- With the move of the assembly lines from the ABC facility to the XYZ facility (4 mile move), the informal process that was being used broke down.
- There were also lay-offs with the closing of the ABC facility and the loss of the knowledge of the 'informal' processes.
- With the move, inventory was now stored in multiple locations and not easily accessible.

### Solution sets:

One improvement was to develop a material replenishment process for those parts stored on each of the assembly lines. Because the usage from day to day and week to week is irregular, it was decided to use a report generated from our current computer system.

It was designed:

- to not only signal when the bins needed to be filled, but how much to put in the bins to account for lumpy demands coming through.
- to give inventory locations of where the inventory is stored.

There are also larger parts that need to be filled daily.

To set up daily fill:

- shelving was assembled and marked with part number and required boxes
- a list was generated for the daily fill items.
- a map was also generated so that (when required) anyone could make the daily fill replenishment.

Both of these new processes were put into place to keep the lines up and running which reduce productivity loss and increased the dollars produced per employee. The stockroom employees are included in the head count of the secondary (backstop) measure of increased dollars produced per employee. This secondary measure prevented us from just throwing more indirect people at the problem.





### Project assessment takes into account risk factors:

- Time - uncertainty of the completion date
- Effort - uncertainty of the investment required
- Implementation - uncertainty of roadblocks

## Project Qualifiers

- The Environment for Success Exists
- Clear Linkage to Business “Y” or Customer
- Enthusiastic Champion can be Identified
- Physical Process Exists and is Operating
- Problem Can be Linked to Flow (Mat'l or Data)
- “Fix” Will Not Require Capital
- Problem Can Likely be Solved at the “Facility” Level
- Current Performance Can be Determined
- Resources Required Can Be Made Available

Check out the Project Selection training module at:  
[www.freesixsigmasite.com](http://www.freesixsigmasite.com) [Training tab – Green Belt, Wk 1]

## 5S + Safety = 6S (Success)

A 5S program (office and factory) is usually a part of, and the key component of establishing a Visual Workplace, and also a part of Kaizen - a system of continual improvement - which is another element of lean.

### Advantages include:

- Safer working conditions
- A cleaner and more organized work area
- Reduction in non-value added time
- Effective work practices
- Efficient work processes

Office 5S – See the Before and After pictures:

<http://www.tocforme.com/5s/2006office5s>

## First Aid Room



Located within the Safety Office



Check out 5S projects, training modules, seminars, videos, and audit forms at:  
[www.freeleansite.com](http://www.freeleansite.com) (click on Organizing, Training, Coaching, or Letter Pile tabs)



We located the Safety office (Engineer and Nurse) on the plant floor. They presented a weekly status report to staff every Wednesday afternoon.



**“Safety First” is on every Leader’s lips in every meeting.**

## SQS 2 - Quality

From Customer returns or from waste identified in the value stream / process maps and rejection data by defect type, cross-functional Quality Improvement teams focused on critical factors. Much improvement was done through cross-functional teamwork. We chartered Kaizen ‘blitz’ activities every week.



**Ed. note: One of my assignments, as plant-level Manager, Lean Enterprise / Toyota Production System (on staff to the General Manager), I was responsible for driving sweeping Continuous Improvement culture changes.**

**Here are some of the practices we instituted promoting the ‘S.Q.S.’ methodology. – J.W.**

## SQS 1 - Safety

A Safety 1<sup>st</sup> mentality is first up in the Lean world, so starting every meeting with a safety tip is not just providing lip service.

This practice drives an integral component of Lean Thinking: respecting people by constantly promoting (and providing) a safe and healthy work environment.

As Lean Manager, I was a Management member on the (strategic) Safety steering committee and participated in daily Gemba walks, looking for “ugly and obvious” safety violations and 5S-oriented workplace abnormalities.

We provided monthly safety topics; suggestion boxes, and

associates led the safety meetings. Safety metrics were first up on the area communication boards facilitating daily open discussion with teammates.

Managers hosted ‘tail-gate’ sessions with associates, informal meetings in the parking lot, to discuss Plant operating conditions as well.

Secondly, teams investigated equipment related causes. Statistical Process Control was implemented on critical characteristics and TPM cards placed on Equipment as part of the Visual Management component.

Basic poka-yoke (mistake proofing) training was provided to all Supervisory, Quality, Manufacturing, and Process/ Product engineering groups.

## SQS 3 - Speed

Daily production targets were communicated in the accountability meetings and posted through several electronic ‘reader’ boards throughout the factory.

Takt time and process cycle times posted and reviewed hourly on the area communication boards as well.

Performance graphs were posted in the “C.I. Central”

meeting room where several dept. meetings were held:

- Value Stream Maps
- Kaizen calendar
- Dept status to TPS (balanced scorecard)
- Results of daily GEMBA walks
- Training matrix for Staff and Supervisors
- TPS audit (Corp.)

We reviewed the key C. I. analytics every Wednesday afternoon with the GM staff.

For more detail, review the “Power Up, Train Up” boot camp deliverables I offer or listen to me describe this approach in a series of interviews with Jeff Hajek at [www.velaction.com](http://www.velaction.com)

**FREE INTERVIEW W/JAY WATSON**



*Quality performance metrics posted and reviewed twice daily (AM and PM “huddle meetings”) on all area communication boards. Root cause/corrective actions reported daily utilizing 5-why analysis and/ or other problem solving methodologies...*



## “Yugo” – synonymous with make big mistake

Malcolm Bricklin, he of the Bricklin SV1, wouldn't be satisfied until he had forced every American to walk to work. To that end, in 1985, he began importing the Yugo GV, which turned out to be the Mona Lisa of bad cars. Built in Soviet-bloc Yugoslavia, the Yugo had the distinct feeling of something assembled at gunpoint. Interestingly, in a car where "carpet" was listed as a standard feature, the Yugo had a rear-window defroster - reportedly to keep your hands warm while you pushed it. The engines went ka-blooeey, the electrical system - such as it was - would sizzle, and things would just fall off. Yugo. Or not.

Read more: [http://www.time.com/time/specials/2007/article/0,28804,1658545\\_1658533\\_1658529,00.html#ixzz0wkL8Fzba](http://www.time.com/time/specials/2007/article/0,28804,1658545_1658533_1658529,00.html#ixzz0wkL8Fzba)



## “Poka-Yoke” - synonymous with make no mistake

Mistake proofing, or ‘Poka-Yoke’, is about preventing mistakes from disrupting production or wasting staff time in rectifying problems. Mistakes may still happen, but through using error proofing techniques the chances of them occurring (and time spent rectifying them) is reduced.

Although the ultimate aim of mistake proofing is to get rid of mistakes, the secondary aim is

to manage mistakes when they happen, before they can affect productivity and efficiency!

As part of on-going process improvement in a 300 employee Phoenix, AZ semiconductor fab (plant) – a ‘hands-on’ workshop was conducted with associates, including the Leadership team and technical staff.

Foundational concepts explored:

- Quality System Benefits
- Level and Type of Poka-Yoke
- Concepts of Device Indication
- Human Factor considerations

### Results:

- ✓ **Mistake-proofing culture evolved. (20 sessions held)**
- ✓ **Over 350 ideas were generated with over \$1,000,000.00 in cost savings / avoidance identified.**

See everyday examples of mistake proofing applications at:

<http://facultyweb.berry.edu/jgrout/everyday.htm>



Check out the free mistake-proofing workshop and training materials offered at: [www.freeleasite.com](http://www.freeleasite.com) (click on Training, Coaching, and Letter Pile tabs)



# 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  
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## "Satisfied customers and pleasing profits", is what 'Thinking Lean' is all about ...



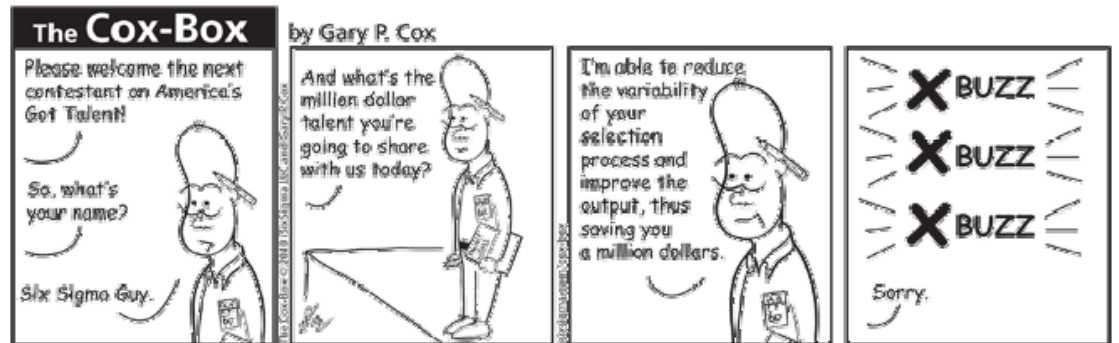
**Jay Watson**

Lean Thinking (manufacturing) is a technique, which by focusing on the overall business picture and waste reduction and removal effort - creates improved flows, enhanced safety, improved quality, and increased bottom line profits.

Lean Thinking (manufacturing) has its effect on the employees and the customers alike. The former are positively impacted by the motivational endeavors while the latter enjoy the increased value and customer services inherent in this approach. It is among one of the few methodologies that cover its impact on such a vast group.

If you believe things can get better for business and industry - like I do, would you share this newsletter with friends and colleagues? It's the only LSS project publication of its kind - available *completely free!* Hope it helps.

### The Audition



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CLIENT NAME  
STREET ADDRESS  
CITY, STATE 12345

### *About Our Approach ...*

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