Improvement Initiatives

Change – for the better

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FREE NEWSLETTER

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"A good solution can be successfully applied to almost any problem."

– Big Al's Law

"Hello Lady !"

Ion Misteak Prufing

by Jay Watson

Mistake proofing is critical to the lean organization for creating and maintaining process stability. Process instability is one of the biggest problems organizations encounter when attempting to implement lean. Among the tools available to the lean practitioner to improve process stability, mistake proofing is one of the simplest, yet most effective.

For the manufacturer, mistake-proofing techniques can be applied to the manufacturing process or the product design itself to prevent manufacturing errors. They can also be used outside of manufacturing: hospitals, financial institutions and other service organization have successfully used mistake-proofing techniques.

While mistake proofing in some forms has been around for a very long time, it was Toyota that formalized a system. Toyota's Shigeo Shingo developed an approach called Zero Quality Control (ZQC). ZQC, sometimes referred to as "zero defects," is based on the principle that defects are prevented by controlling the performance of a process so that it cannot produce defects even when a machine or person makes a mistake.

Poka-yoke, or mistake proofing, is one key aspect of ZQC. Poka-yoke or mistake proofing systems use sensors or other devices that make it nearly impossible for an operator to make an error.

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Oops! Best Buy $9.99 TV offer was too good to be true ... [8/12/2009]

NEW YORK – Few if any of the deals retailers have offered online during the recession have been as good as Best Buy Inc.'s sale price of $9.99 on a 52-inch TV Wednesday. But it quickly turned out the offer was too good to be true.

The electronics retailer said it will not honor the $9.99 price posted Wednesday morning on its Web site for a 52-inch Samsung flat-screen TV. By early afternoon, the TV was listed at $1,799.99, almost half off the original $3,399.99 price.

Bloggers and Twitterers lit up the Internet with posts about the offer, some insisting Best Buy must honor it, others making jokes.

Best Buy, based in Richfield, Minn., said it has corrected an online pricing error and will not honor the incorrect price. Orders made Wednesday morning at the incorrect price will be canceled and customers will receive refunds, the company said.

Best Buy did not immediately return a call for additional comment.

Shares fell 27 cents to close at $36.50 Wednesday. (8/12/2009)

Bright Ideas !

 Bag It! Reynolds® Oven Bags are heat-resistant nylon oven bags for cooking warm, hearty dinners without basting or tending. Simply put turkey, chicken or other meat in the oven bag along with your favorite vegetables, sauce, or spices, place it in a baking pan and pop it in the oven. Dinner will come out in less time - juicy and delicious with no messy pan to scrub.

 FACEBOOK has launched a new "Fan Box" widget as an extension of Facebook Pages. Companies with Facebook Pages can add the widget to their own home pages and it easily allows any visitor to become a fan w/ just one click.

 Compact fluorescent lamp (**CFL**), also known as a **compact fluorescent light**, is a type of fluorescent lamp designed to replace an incandescent lamp and can fit into most fixtures.

Compared to general service incandescent lamps giving the same amount of light, CFLs generally use less power; have a longer rated life, but a higher purchase price.

In the United States, a CFL can save over $30 USD in electricity costs over the lamp's lifetime compared to an incandescent lamp. Like all fluorescent lamps, CFLs contain mercury, which complicates their disposal.

Ion Misteak Prufing … (continued from page 1)

They regulate the production process and prevent defects in one of two ways:

Control system: stops the equipment when an irregularity happens or locks a clamp on the work piece to keep it from moving on when it is not completely processed. This is the better system since it is not operator dependent.

Warning system: signals the operators to stop the machine or address the problem. This type of system is operator dependent.

Basic Methods

There are three types of poka-yoke methods: contact methods, fixed-value methods and motion-step methods.

Contact methods detect whether a product makes physical or energy contact with a sensing device.

Fixed-value methods should be used when a fixed number of parts much be attached to a product or a fixed number of operations need to be done at a workstation. Under this method, a device counts the number of times something is done and signals or releases the product when the value is reached.

Motion-step methods detect whether a motion or step has happened within a certain period of time. In addition, they can be used to ensure that events happened according to a certain sequence. These methods generally utilize sensors and devices like a photoelectric switch connected to a timer.

Mistake proofing is a powerful tool for the lean enterprise. It can be applied to almost any process to create more stability. However, it is important to implement mistake-proofing systems where they are needed most.

To learn more - checkout the Training Material and the *free* 2-hour Mistake Proofing workshop offered through: **www.freeleansite.com**

Preventing the re-occurrence of a mistake

The selected mistake proofing technique should qualify the following criteria:

- Inexpensive.
- Based upon common sense, preferably of the operator or the 1st line employee.
- It MUST eliminate Occurrence / Detection of the problem at the source itself.

Occurrence oriented Poka-Yoke should follow the procedure as below:

First classify the source of 'Occurrence' as follows:

1. Required action is NOT performed or is performed incorrectly.
2. Undesired action is exercised.
3. Information essential for performing the action is mis-interpreted.
4. Mistake occurs due to complexity.

After having classified the source, apply one of the following techniques, as appropriate, to prevent the occurrence:

- Use of 100% prevention devices such as Fouling Pins, Contoured locators or templates, Proximity or Photo-electric sensors, Limit or Micro switches, Warning lights or Buzzers, Pressure transducers.
- Design to modify to ensure that in assembly the parts shall not join if aligned wrongly. Machine will not run if operators' hands or feet are not outside or if the job & tooling are not in right position.
- These techniques should be integral part of the process. The devices are placed sufficiently close to where the mistakes occur, providing fast feedback to the operator, of mistakes occurring.

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Dispensing with the DVD [Store]

Innovation

McDonald's Ventures, LLC, a wholly owned subsidiary of McDonald's Corp., in which McDonald's owned 47 percent of the company with another 47 percent of redbox owned by Coinstar, initially funded Redbox Automated Retail LLC.

In February 2009, Redbox was purchased for $175 million by Coinstar. The company passed Blockbuster Inc. in 2007 in number of U.S. locations and passed 100 million rentals in February 2008. As of April 2007, each kiosk averaged 49.1 rentals per day and $37,457 USD a year in revenue. Competitors include The New Release, DVD Xpress, and DVDplay.

Redbox began in 2002 using re-branded kiosks manufactured and operated by Silicon-valley based DVDPlay at 140 McDonald's restaurants in their Denver, CO test market.

The first DVD rental kiosks in the Washington, DC accompanied the company's unsuccessful attempt at automated convenience store kiosks.

Continuous Improvement

In May 2005, Redbox phased out the DVDPlay-manufactured machines and contracted Solectron — a subsidiary of Flextronics, which also manufactures the Zune, Xbox, and Xbox360— to create and manufacture a custom kiosk design.

A Redbox bar-coded DVD tray, delivered by and returned to the kiosk.

Mistake-proof process

The company's typical self-service vending kiosk combines an interactive touch screen and sign, a robotic disk array system and web-linked electronic communications.

Kiosks hold more than 600 DVDs with 70-200 titles, updated weekly. DVDs can be returned the next day to any of the company's kiosks; charges accrue up to 25 days, after which the customer then owns the DVD (without the original case) and pays $25.00.

Customer Service

Customers can also reserve DVDs online, made possible by real-time inventory updates on the company's website - **www.redbox.com**

- Convenience, over 12,000 locations nationwide
- Low cost rental, $1.00 per movie / per day plus local taxes
- Rent in one location city, county, state and return to any Redbox location anywhere (great for travelers)
- No late fees, you pay for each day you keep the movie (remember $1.00 per day, technically not a late fee!)
- No long-term contracts or contract of any kind!
- No waiting for movies to arrive in the mail (sorry Netflix and Blockbuster)

Coaches Corner

Attack these 7 types of waste within the Design function

Defects = miscommunication, drawing errors

Overproduction = designing, but not making (never gets to launch), no standardization

Transportation = data hand-offs

Waiting = for other functions or disciplines

Inspection = time spent reviewing data not organized or utilized

Motion = Unnecessary analysis or testing

Processing = redesign, poorly run team meetings, sending or printing design files without request

Note: One auto manufacturer worked with supply partners to consolidate and standardize countless specifications for wire harnesses. That action produced tens of millions of dollars in savings - a 30% reduction in procurement costs over 5 years.

Bailout Bunk!

Hey "Government Motors" - What 5 Cars are you going to make for America?

Innovative and dependable car manufactures like Honda and Toyota have been taking a large portion of their US market share for many years and the GM bankruptcy is only adding to this long standing trend. The service, reputation, and quality of GM's cars in recent years have declined forcing loyal US buyers to take their business elsewhere.

HINT:

Without understanding the Voice of the Customer (VOC) and fully applying the concepts of Lean Thinking and Six Sigma quality, you don't stand a chance. Learn or Burn!

More GM mistakes at:

http://www.businessweek.com/lifestyle/content/aug2009/bw20090813_397576.htm

Be More Productive! (Part 1 of 2)

These tips will help you increase your personal effectiveness as well as your workplace productivity.

Determine your goal.

It has to start with having a specific goal or vision. You must know what you want to achieve and why you want it. Having a specific goal makes work or whatever you are involved in becomes enjoyable. You'll have a sense of purpose and the will to do and to keep on moving.

Get up earlier.

There's freshness and newness in the early hours. This is one of the best times to plan your day in advance. Getting up early gives you the opportunity to start ahead of others and without interruptions. Early risers have more vitality and so are more efficient.

Prepare and plan.

One of the ways to get more done is to get yourself prepared. Write down your plans. Getting organized is a great time saver. You are able to get more things done in less time.

Take some time for creative visualization. Prepare yourself mentally. Rehearse the activities that you want to perform and the responses you wish to receive. You will experience in your outside world what you visualize in your mind.

Stay later and put in the extra hours.

Work harder than everyone else does. Dedicate yourself full heartedly in whatever you are doing. You will gather lots of knowledge, skill, and also rewards from your dedication and efforts. Think of it as an investment of your time for your future growth and success.

Preventing the re-occurrence of a mistake (cont)

Detection oriented Poka-Yoke should use one of the following techniques for ensuring 100% detection of the mistake:

- It should be autonomous inspection occurring without intervention.
- It should be 100% inspection that occurs without intervention.
- It should determine 'before the fact' whether the conditions for 100% quality exist or not.
- It should make the error visible to the operator.
- Consider supply of exactly made kits of components to the assembler, so that any balance part will signal error in assembly.
- Consider use of electronic sensors to activate warning lights or buzzers.
- Use color-coded parts or graphics.
- Make use of contact devices e.g. Fixtures, Limit switches, probes or Non-contact devices e.g. LEDs, Pressure transducers etc.

Effectiveness of the applied Poka-Yoke technique should be judged after observing the performance, for a period of a minimum of one month.

Free power point presentation @ **csob.berry.edu**/faculty/jgrout/**mistakeproofing**667.ppt

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