

Lean Learning Center presents

LEAN PROGRESS

Engagement

Ideas for helping your company transition to lean effectively and rapidly.

By Jamie Flinchbaugh

Learning happens in the classroom. Coaching happens through a formal mentor often away from our work. At least that's what we've been lead to believe.

But that view has many limitations.

As it applies to learning, learning is never internalized in the classroom. There is a difference between information, which is in the head, and knowledge, which is the ability to apply that information. What we ultimately care about is the latter. Except in a few extreme cases such as military simulations and teaching hospitals, application of knowledge is either skipped altogether or is quite contrived and limited.

As it applies to coaching, coaching requires knowledge of the current state, feedback, and active experimentation. None of these can happen effectively or efficiently away from the work. A sports coach requires observing the athlete in action and providing feedback in ways that help expose the gap between what is

intended and what is realized.

So the assumptions are flawed. We must discard these ideas that most mechanisms of engagement can be mechanistic, contrived, and event-based. Instead, engagement must be fluid, at the point of activity, and continual. So how do you create that? I propose looking at it from a combination of building the right culture that enables and even values engagement, building the right systems or management infrastructure, and building skills in both employees and managers to make it all work.

The Role of Culture in Engagement

Culture is the set of shared assumptions, beliefs, and principles that a group or organization holds. It is best measured or observed by the shared behaviors or habits that are exhibited.

A certain set of beliefs and behaviors needs to be developed to support engagement. The most important people to exhibit these behaviors are front-line managers. They are in the best position to create the culture, and the easiest to de-

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Engagement (Cont.)

stroy it, simply based on the frequency and consistency of engagement. Front-line managers are often ignored or at least under-invested, in during a lean transformation.

The beliefs that support engagement can be stated many ways, but are centered around two fundamental principles. One is that everyone can make a contribution, and is an expert at something. Two is that given the opportunity, most people want to make a positive contribution. These are foregone conclusions that all people share these beliefs. There are others that can also be enablers to success. What do you consider them to be?

But the important thing is not that front-line managers, and managers of managers, espouse those beliefs. What's important is that they practice them through the right behaviors. Behaviors are what people experience and what influences their own behaviors. Secondly, regardless of your role, the only way you can really measure whether your front-line managers believe these fundamental principles is by observing their behaviors.

So what behaviors best demonstrate these beliefs?

How a person reacts when someone makes a mistake is a great indicator. If the first reaction to a mistake is condemnation and chastising, then this is not consistent with a belief that people are intending to do good. If instead a mistake is met with empathy and support to

correct the mistake, that is a very different experience to the individual. An overall approach of inquiry first, asking questions to draw out people's knowledge, to learn from them, and even to challenge them demonstrates that you believe that they have the knowledge, they just need to put it to better use. A leader that believes that people can make a contribution will seek out opportunities to capture that, whether that is



participation on kaizen events or the development of best practices. Exhibiting the opposite belief is that any time away from direct labor is inherent waste. What other behaviors would you like to see?

If you are coaching others, keep in mind that just because someone isn't exhibiting the right behaviors doesn't mean that they DON'T carry those beliefs. They

“A leader that believes that people can make a contribution will seek out opportunities to capture that.”

Engagement (Cont.)

may lack the skills to exhibit them, or they may require feedback because they think they are exhibiting them when they are not. Sometimes there is a gap in our own true beliefs and our own behaviors. But in the end, it is the behaviors that make the difference.

The Development of Systems to Support Engagement

When conducting an assessment, one of the most revealing questions that I seem to ask is "if you have found waste or an opportunity to improve, what do you do with it?" I usually get answers ranging from "I don't know" to "I wait for the next kaizen event". Organizations will often want people engaged and even teach them some skills to get them engaged, but fall short of creating a mecha-

nism that actually enables this. Instead, we become dependent on the sheer willpower of the individual to decide to overcome momentum and make a change. This is a big chance to take.

Systems and processes must be build that support engagement. This includes problem solving to new idea engagement. There is certainly no one best mechanism.

When developing systems, consider two important criteria in the design. First, consider the natural flow of work. You want people to be able to leverage whatever systems you design while they are doing the work. If they have to disengage with the work to engage in some other system, it is not going to be very supportive of their needs. Second, consider how you can enable decision making at the point of activity within the systems. This might be decision guides, criteria, standard work, or simple empowerment. Anything that requires permission or interruption in order to complete a task is disempowering and disengages the employees.

Systems can include problem solving or help chain systems, suggestion or idea systems, or even processes such as score-

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Engagement (Cont.)

boards and team huddles. I wrote about help chain systems in a Leading Lean column *Forging Your Help Chain*, and shared the mistakes of many suggestion systems in another Leading Lean column *Make Suggestions Productive*. The second column demonstrates a common mistake when designing any such system: don't build a new disconnected system from the work. It must be embedded in the work. It must be physically where the work is done, available when the work is done, work within the flow of daily work, and leverage the infrastructure that already exists.

Skills Required for Engagement

Skill gaps to create engagement exist both in employees and managers, although most transformation efforts tend to focus on only one or the other group.

Employees need to be able to identify problems. Have you ever walked into a team and asked "what problems do you have?" and received the answer "no problems". Well, gee, I've been here 5 minutes and spotted 3, how do you have no problems? Not only do they need to be able to spot problems and opportunities, but do so consistently with other teammates.

Team members must be able to engage in brainstorming, experimentation, and communication to be able to develop, share, and decide on solutions to problems. The ability to work with your teammates in a productive way to determine solutions is more than just having the opportunity to contribute. Skills make this succeed or fail.

To be able to support others in idea development and execution, you must be willing and able to:

- Listen
- Give feedback
- Share a common language of processes and ideas

To be able to contribute their own ideas, an individual must be able to:

- Identify waste and opportunity in their work
- Be able to study and find causes of problems and gaps
- Able to develop solutions that are creative and affordable
- Communicate ideas to others

Engagement is one of the major differentiators for companies in the years to come. Organizations shouldn't be working on it to win some "best places to work" awards. They should work on developing engagement because the ideas of many can outrun the ideas of a few, and your organization can use every advantage it can find.

"Engagement is one of the major differentiators for companies in the years to come."

Going Lean at Multi-Craft Contractors

There are many different reasons why a company chooses to embark on a lean journey. Some companies feel the heat of competition closing in and realize they need to do things differently. It may be that, as a supplier, they are being forced to provide significant cost reductions and their profit margins are diminishing, or they simply understand that doing business the same old way will yield the same old results and that is no longer an option.

Multi-Craft Contractors has been growing their business since 1972. Located in Springdale, Arkansas, they service industrial and commercial clients providing me-

chanical contracting, electrical contracting, metal fabrication and specialized services in a 360 degree approach. They have a diverse workforce of over 300 professional craftspeople in several business units. They handpick their team of specialists to manage client projects from concept to completion. They value their employees and see them as the key to their success and they are committed to providing value to their customers.

Multi-Craft has rapidly grown from a small company into a much larger one. Rick Barrows, Multi-Craft's President, was concerned that, although they had many

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Multi-Craft Contractors (Cont.)

opportunities, they didn't have a company structure or plan to keep up with the growth. Rick says, "It was frustrating to know all the things they needed to get their arms around."

Tom Pederson, Operations Manager for Multi-Craft, understands that "if you create the culture that expects people to be the best they can be and you provide the tools, the company will be the best it can be."

Tom had been investigating lean for some time. Previously with Koch Industries, Tom had been exposed to the Theory of Constraints and Market Based Management and it became his benchmark for how things should work in an organization. Koch provided the tools for people to grow and develop. After Koch, Tom spent time with Bausch & Lomb who had just begun to provide one-day introduction to lean classes. When Tom left Bausch & Lomb he knew he wanted to "be in an organization that's striving for excellence" and saw Multi-Craft as that kind of company.

His search for assistance led him to the Lean Learning Center's website and he began to understand that lean could be the answer to their challenges at Multi-Craft and that "lean doesn't apply just to manufacturing". This was important to Tom because, although

Multi-Craft does do some manufacturing (primarily fabrication), they are essentially a "service" company.

Tom says, "Multi-Craft has done things right but what processes are getting us these results? We grew very fast over the last five years and we were hitting a barrier." Tom read about the Lean Experience, Lean Learning Center's five-day program designed to enable companies to understand and incorporate the most fundamental principles and rules of lean, whether you have just begun a lean initiative or are striving to take your company to the next plateau. Additional exposure to lean came from Simmons Foods, a Lean Learning Center client, and a client to Multi-Craft. Simmons had been licensed and trained by Lean Learning Center facilitators to provide the Lean Experience class onsite for their employees and suppliers.

Kevin McDonald, Special Projects Manager for Multi-Craft, who had a connection at Simmons, arranged for MCC to

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Leading Lean A-Z *F:Be First* (Cont.)



observe the first day of a Lean Experience class. Scott Barrows, Fabrication Shop Manager and Kevin attended the first day and both came away excited and energized, believing that this could be the answer for Multi-Craft. Tom, Scott & Kevin conveyed the importance and value of this unique opportunity at Simmons to Rick Barrows and the company took a crucial step. During the following 6 months, MCC's management, including all three owners, attended the Lean Experience at Simmons Foods.

Tom and Kevin subsequently attended the five-day Lean Kaizen Boot Camp and Lean Value Stream Mapping classes and, along with Scott Barrows, Fabrication Shop Manager, and Michael Jones Preventative Maintenance Manager, they attended the three-day Leading Lean class, all provided at the Lean Learning Center facility in Novi, Michigan. The classes enabled them to start the journey with some kaizen events on their own. Tom said it was a "pivotal point". Momentum had started to drop and they realized they needed to zero in on some areas and build "lean hot spots". He said

they weren't measuring, "just doing". Multi-Craft had people hungry to improve themselves but they needed a common language, structure and the skills.

Tom wasn't discouraged. "Lean makes sense to me. I want it to make sense to other people."

Rick also began to see lean as an answer to the struggles growth had caused. "We did well in the economic downturn. How do we keep ourselves from becoming complacent?"

After completing some lean events on their own, Multi-Craft further enlisted the Lean Learning Center to energize their lean journey and to move them in the right direction. They began in two core areas: education and application. The Lean Learning Center helped them to institute a Lean Learning Lab (L3) in fabrication to build lean skills and to provide a working example of lean that everyone in the organization can learn from.

The L3 is a highly effective technique for changing the culture of an organization and realizing meaningful performance gains. It's a place that is determined by process, sub-process or geography, where small groups of people learn, practice and apply the rules, principles and tools of lean at a faster pace, with greater frequency and at less risk than to entire business units. Once the L3 is successful, these small groups become catalysts for broader application throughout a business unit.

"Multi-Craft had people hungry to improve themselves but they needed a common language, structure and the skills."

Multi-Craft Contractors (Cont.)

In addition to the L3, the Lean Learning Center's consultants developed a customized three-day Lean Fundamentals class. The class incorporates presentation, simulations and actual application to reinforce learning and focuses on more than just teaching fundamental lean tools like 5S, Visual Management and Standard Work Instructions. It presents the concept that lean is a way of thinking that includes everyone, and requires application through the development of leaders at all levels of an organization. The program began with the delivery of the class to Multi-Craft's lean leaders. The lean leaders in turn delivered it to others in the organization, with Lean Learning Center facilitators acting as coaches. Currently, Multi-Craft is facilitating its own class. Having completed the first solo class in May, they now have the in-house capability to provide for 18 people to attend the Lean Fundamentals class as needed. The intent is to provide the class on a monthly schedule getting the majority of their employees through the class within the next two years.

Tom views lean as a never-ending journey and is grateful they found the Lean Learning Center to assist. "You envision a target, set a goal and be very persistent. If you know you are working toward the right goal, with the right people to guide you, and stay focused, you'll get there."

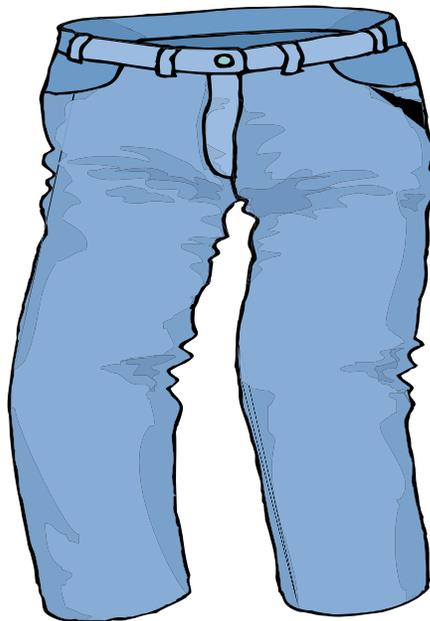
Rick is very excited about lean at Multi-Craft. He feels if you "provide the opportunity to people, they will thrive and flourish. We want to be at the top of the list in providing value in what we do. Lean will enable Multi-Craft to have a secure and sustainable future." really, creating lumber produced a wasteful byproduct of sawdust and wood chips. However, through innovation, this throwaway was turned into value-added products such as particleboard and wood pellets for stoves. Look at the waste streams - what can you salvage that can provide value.

Another way is consider your organizational capabilities. Perhaps the only truly sustainable competitive advantage is your intellectual capital or people capabilities. Are you fully developing these? Every project and every improvement that has a performance objective could also have a learning objective. Maybe you reduced some cost, but you also grew the capabilities of a person. IF you manage learning objectives, you can build new strength while taking out waste.

"Perhaps the only truly sustainable competitive advantage is your intellectual capital or people capabilities. "

Lean Quick Tip-Jeans Day

Good problem solving practice teaches us to go to the real place when a problem occurs. When we go and see, we are able to gather facts, understand better all of the systemic issues, and gain a much better perspective on the problem. Anyone who has ingrained this into their problem solving approach can relate to “ah-ha” moments that are gained by the go and see approach. If this works so well when there is a problem, why not do go and see key processes even if there isn’t a problem? After all, things can always be improved and there is waste in almost every process.



One great way to go and see is to put on a pair of jeans, or whatever is appropriate, and go work in the processes. You should go do someone's job for a few hours. The TV show Undercover Boss is based on this premise. Some of these leaders walk away with very useful observations. Our recommendation is to do this, although not undercover.

The value in doing so is quite high. First, from the employee’s perspective, there aren’t many better ways to connect with front-line workers and it shows a tremendous amount of respect for their work. It also shows that you care enough to see work through their eyes. Second, the insights that you gain on how things work is tremendous. Are problems obvious to all? Do people respond appropri-

ately when problems do occur? Are employees getting feedback on how they’re performing? Is the work structured in a way consistent with the Lean Principles?

Everyday, we make decisions that impact our organization in very important ways. Go out and improve your perspective so that these decisions are made with much greater clarity. Thrown on a pair of jeans and go to work.

‘One great way to go and see is to put on a pair of jeans and go work in the process.’



Federal Heath Sign Company Lean Case Study



Company Profile: Federal Heath Sign Company is an industry leader providing custom electric signage, canopy and fascia products, commercial remodeling, nationwide conversions and maintenance services. Our four state-of-the-art manufacturing facilities, located in Oceanside, CA; Delaware, OH; Euless, TX; Jacksonville, TX and multiple sales/maintenance offices are strategically located to offer our customers nationwide solutions with local response times. We're constantly looking for new and better ways to improve how we do things. We always try to find ways to take care of our customers and satisfy their needs tomorrow better than we did today.

Mission: Federal Heath Sign Company identifies the on-premise advertising, identification and facilities maintenance needs for discriminating customers in selected markets. We match our core strengths and resources to meet those customer needs. Within a culture of teamwork and continuous improvement, we are dedicated to creating value for our customers, our employees and our shareholders. From the FH mission statement, the Lean/CI mission is to develop a culture of teamwork and continuous improvement that creates verifiable value (directly impacts key performance indicators) for all stake holders.

Strategy: Federal Heath, the industry's largest company, combines internal growth with acquisitions and continuous improvement in all areas of our business in creating value for our stakeholders and satisfying needs of customers for visual communication products. *Within the FH strategy, the Lean/CI leadership focus is to develop a culture of continuous improvement across all areas of the business through strategy deployment of lean/continuous improvement methodology. Specific strategy is to engage, influence, develop, and link improvement focuses to address opportunities contributing towards operational excellence.*

Opportunity Statement: With the economy driving revenues significantly below 2007 levels, Federal Heath has engaged in an intense three year journey to improve key performance indicators and sustain profitability through the implementation of continuous improvement and operational excellence methodology.

Opportunity Identification:

- Previous current state for inventory turns in one of our plants was 3.5.
- Customers have set delivery dates as low as five days for some products that involve molded extrusions and plastic from out of state suppliers.
- One plant was stuck in past culture where the customer would order a 100 of one sign instead of 2 or 3.
- Estimates were originally developed per past large batches and subsequent material suppliers were set up to support that practice. In today's environment, machines are set up for 5 parts rather than 100 and this really feeds excessive WIP with an overload of

"With the economy driving revenues significantly below 2007 levels, Federal Heath has engaged in an intense three year journey to improve key performance indicators and sustain profitability. "

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queue time.

-Based upon the slower volume of orders, processes had to be changed to efficiently produce smaller batches. In doing so, key supplier partnerships needed to change their past practices, while implementing delivery/production schedules to align with the ultimate customer value.

-Lack of cycle counting caused inaccuracies in raw material inventory and management.

-Excessive scrap caused lack of accuracy in on-hand inventory levels.

-Lack of actually knowing how much raw material and WIP were in the plants.

-Lack of receiving material to point of use caused excessive transportation and conveyance.

-Multiple building locations contributed to the need for similar raw material inventory to be taken back and forth across the street in one plant.

-Lack of understanding by purchasing on the impact of inventory cost in relation to cash flow.

-Past culture habits contributing to inefficient practices in inventory management.

Benchmark (comparing similar processes):

Inventory turns are a key determining factor in depicting successful material management for many organizations. In research of this particular measurement, any inventory turn that is less than double digits is considered poor and a great opportunity. Per business reports we have benchmarked our continu-

ous improvement efforts through a measurement known as "Primary Working Capital". Other signs of strong financial stability can be seen in measurements seen in our accounts payable cycle time. All of these items contribute in certain elements towards the voice of the customer. In many instances involving today's economic pressures, cash flow is critical to survival and debt can lead to a companies' demise. Primary Working Capital is explained by Kevin Stotmeister, our CEO, as follows: To the extent that Primary Working Capital Productivity is a good indicator of the overall effectiveness of the time-based and process-oriented programs that companies are using to improve operations and represents the net overall effectiveness of all the "CI" and "Lean" activities implemented, it is a great metric to gauge "Lean" within our company. In general it simply shows just how effective and efficient we're becoming at bringing raw materials in, converting them to quality products, shipping, installing and getting paid for them. Improvements in our PWC Productivity track with becoming a better competitor and industry leader. The kinds of things we do to raise working capital productivity include eliminating material-handling steps, initiating concurrent design and streamlining the customer billing and collection process make us stronger. As we wring the same or greater revenues out of substantially less working capital, we begin to enjoy multiple cost advantages - including savings on capital not needed and labor savings on production. It may not be popular, but in conjunction with inventory turns, I still believe it to be the best metric tracking Lean implementation success....ours has doubled in the last couple of years and we continue to improve.

"In many instances involving today's economic pressures, cash flow is critical to survival and debt can lead to a company's demise. "

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Implementation:

Kaizen Focus: Kaizen is a team based approach towards implementing process changes in small increments. Its goal is to identify waste by forcing production problems to surface so that they become visible for everyone to see. Once identified, such problems are solved with worker consensus. Our continuous improvement team members, which encompasses every employee, uncover and measure waste; generate, select, and implement ways to eliminate it; measure and document results; and establish means for sustaining and monitoring the improvements gained. Examples of tools within our continuous improvement implementation have been the use of spaghetti diagrams and value stream mapping to determine waste, current state, and potential flow improvements.

Continuous Improvement Training: Implementing book club discussion groups that

flow down through all levels of the organization. Current book club process for plants has involved: “Identifying Waste on the Shop Floor” by Productivity Press and the “Hitchhikers Guide to Lean” by Jamie Flinchbaugh and Andy Carlino, and “Creating a Lean Culture” by David Mann. Each book is flowed down from plant manager, lean champion, supervision and shop floor levels. The focus is the ability to identify waste and implement visual tracking strategies to depict process success. Inventory reduction is a key element. The book club process involves:

- Pre-read material
- 1 Hour discussion format - weekly - rotating facilitator
- Follow-up with selected action items applicable to area of responsibility and/or shop floor

Example: Waste walk training similar to the

“The focus is the ability to identify waste and implement visual tracking strategies to depict process success. ”

This article is contributed by Rick Foreman , Director Lean Development for Federal Heath Sign Company. Rick joined Federal Heath in January 2007 as the Lean Development Manager. Since that time, he’s been instrumental in assisting the company in fulfilling the Vision for Lean, Continuous Improvement. Rick has worked with the Operations and Office Lean Champions and the Senior Location Managers in developing Lean book club activities and transforming the workplaces through 6S and process improvement programs in particular. He has coordinated the activities of the Senior Management Group’s oversight via the Lean Steering Committee. With Rick’s focused attention and enthusiasm Federal Heath seen the combined contributions result in tremendous improvement in operations, in efficiencies and in financial performance and results. In 2009, the culture transformation to Continuous Improvement (CI) led to a 20% improvement in profitability over 2008, even with a 27% decrease in revenues during this recessionary period.

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Ohno circle implemented in the Toyota Production System. An additional reference is found in the waste identification check list noted within this paper.

-Additional exam/review per chapter reinforcing key elements of text and feedback with reflection on how either personally, their team or the organization is doing in light of presented information. Elements of assessment on continuous improvement journey are discussed.

-Every hourly employee on the shop floor completes World Class Manufacturing training series.

-Continuous improvement wording added to appraisals to reinforce culture change to lean methodology.

-Implemented an intensive and measurable cross-training program to establish a flexible workforce to meet customer requirements.

Skills matrix developed for all functional departments within organization.

HR captures training and follow-up as a key Hoshin strategy.

High Level Implementation Strategy: Strategy deployment has fed the steps of implementation through all departments, while maintaining the focus on the overall vision, mission and purpose of Federal Heath. One key factor was the implementation of lean champions within each plant. Although a shared resource with existing responsibilities, they each take ownership of continuous improvement culture change in each facility. In addition, they represent a link and model as their areas and personal lean execution represent islands of excellence. After defining the kaizen or continuous improvement approach as a key element of implementation, strategy deployment is used to signify what key actions within functional and value stream elements are to be addressed. An important

element of strategy deployment was establishing a performance management, recognition and suggestion system to reinforce the improvement successes and behaviors. Federal Heath implementation actions involved such examples as:

-Recognition in monthly company newspaper with pictures and success story.

-Gift certificates to restaurants. Reinforcing daily continuous improvement activity as a part of the new culture. (i.e. Lean Champions passing out Whataburger gift certificates in the Gemba on a consistent basis)

-Recognition given in monthly plant/company meetings.

-Lunch on the lean guy. (i.e. pizza for accomplished team task)

Where did the deployment begin?

One of the first actions to establish discipline, accountability, visual exposure of waste, and a common focus was to establish a 5S/6S visual management system. We rolled this out across all locations to reinforce common ground between office and shop floor functions. We actually have team members in home offices who submit a grade. The key is everything having a place and being in its place. This greatly impacts our focus on inventory reduction. An organization must know what they have and where it is. Therefore 6S for us has been a significant initiative for beginning and implementing continuous improvement activities. The 6th "S" for us represents safety, which certainly can impact cash flow with high insurance costs, if not a solid part of a cultural change. A few of the steps involving 6S implementation for example are as follows:

-Develop an audit cross-functional audit team to monitor.

"An important element of strategy deployment was establishing a performance management, recognition and suggestion system to reinforce the improvement successes and behaviors."

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- Engage, influence, and consistently communicate the “why” behind 6S.
- Set 6S expectations with employee orientation.
- Develop islands of excellence as examples. Celebrate 6S successes and accomplishments.

Next Step:

After establishing a solid 6S program, the team continues to work on establishing visual charts on a departmental level to expose and show elements of conveyance, which contribute to excessive inventory and costs. Once implemented, the team has been able to see the waste more clearly and inventory has been able to be reduced. Originally one supervisor “believed” the average set-up time was 30 minutes, when in reality, after stop-watched time studies, the time was 60 minutes. Each shop level measurement was implemented to communicate the culture change required to correlate with customer changes to smaller quantity orders. The elements, contributing to the successful transformation were the closing of the 80,000 +

square foot of storage across the road. Dies were brought over to ovens at point-of-use and set-up reduction contributed to the gains. Many elements of WIP used to be kept in almost ten different places within the facilities. Today, they are either in the department or in final assembly. An interesting cultural impact was stated from many of the plant supervisors, who boldly declared that moving the tooling by the machines, the faces to assembly in one area, and the closing of other building could never be accomplished successfully. Today, over 200 dies are now at point-of-use on numbered racks, with assigned numbers, and tracked on a sheet for location. Team members no longer spend hours searching for dies and faces across both facilities. This again shows the importance of a strong 6S program in visually displaying what is needed where and in what quantities. In addition, the implementation of shadow boards has contributed to improved organization throughout all facilities.

“Today, they (WIP) are either in the department or in final assembly. ”



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Tools Deployed in Lean Program:

-Deming cycle and DMAIC (Define, measure, analyze, improve, control) has and will continue to be used as a way of aligning process improvements within Federal Heath to help each department and cross-functional interactions.

-As identified for applicability, flow and data analysis charts have been implemented to identify opportunities, establish a current state, and show trends towards the future state.

-Federal Heath uses an empowered team approach with focused training on the elements involving internal and external customers who are determining what is value added.

-Federal Heath Kaizen is executed in more of a "Point-Kaizen" process, where small daily improvements in attacking waste are engaged by every person within the organization in the Gemba. Learning by doing continues to show significant results over event based Kaizen. For us an event might be a 15 to 30 minute lean activity.

-Set-up reduction: This has entailed making sure that we have the right paperwork and all items needed at point-of-use when moving from one project to the next. The majority of our work is custom, with one-off type manual fabrication. Some of our equipment has implemented time studies and improvement methodology for machine set-up reduction.

-Root Cause analysis and creative problem solving such as asking the 5 whys are implemented as the culture is moved towards being a complete team of problem solvers at every level: *Examples: Pareto Analysis charts implemented at each plant to identify which root causes contribute the most to the variances. The analysis was able to show what needed to be worked on between the plants, which represent a*

couple of different value streams.

Results/Benefits:

One facility results:

-Inventory turns improved from 3.5 to 10.6 in the last 2 years, 71% improvement.

-Annual inventory time reduced from 1 week to 4 hrs., with no pre-clean and organization as preparation.

-75% Inventory value reduction in 3 years.

-Manufacturing variances improved from -17.8% to + 2.3% in last 2 years.

-Eliminated 80,000 + square feet of manufacturing space. Estimated \$100k annual lease savings.

-Scrap reduced \$500k from 2008 to 2009

-OTD improved from 70% to 95%

-Set-Up Reduction: 55%

-Entire facility as a value stream transformed from a significant loss to profitability.

-Similar % improvements were achieved at the other three manufacturing plants.

Company as a whole:

-Inventory Turns: 55% improvement 08 to 09

-Customer satisfaction scores: 18% improvement from 7.6 average to 9.0 and over out of a 1-10 scale.

-% of Jobs Completed: 70% improved to 93.5%

-Product Cycle Time: 55% improvement

-Warranty less than 1% of total sales

-Improved community involvement, strong financials, and solidified customer, team members, and supplier relationships.

Conclusion/Summary:

Federal Heath has been on an intense world class continuous improvement implementation plan during the past 3 years. The cultural impact of doing something the same way for 30 years has begun to be replaced

"Inventory turns improved from 3.5 to 10.6 in the last 2 years, 71% improvement. "

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with an attitude of continuous improvement. Team members are beginning to view problems as opportunities as we move closer to the ideal state, while pursuing excellence and perfection. This strategy is driven and supported from the CEO and senior management team. Kouzes and Posner in, “The Leadership Challenge,” denote the five practices of exemplary leadership as modeling the way, inspiring a shared vision, challenging the process, enabling others to act, and encouraging the heart. In correlation with leadership strategy, John Kotter in, “Leading Change,” denotes that change requires an eight stage process including; establishing a sense of urgency, creating a guiding coalition, developing a vision and strategy, communicating the change vision, empowering employees for broad-based action, generating short-term wins, consolidating gains and producing more change, and anchoring new approaches in the culture.

At Federal Heath we continue to inspect what we expect in our journey to excellence. Our team members continue to understand that what gets measured gets improved. Every team member realizes importance of measuring our ever changing current state, while processing improvements towards the future state, which continues to be critical in our journey towards operational excellence. In conclusion, Federal Heath will continue to expand lean methodology through key supplier partnerships and across the whole enterprise, which includes all internal and external processes.

Additional elements will focus on cross-functional integration, the elimination of information blindness, and an understanding that we always work for the customer. In order to sustain such improvements as

noted, we will need to continually assess whether our principles are serving us well; do we have the right skills; is our tool box effective; are we creating a learning environment; and are we learning how to establish a culture of high agreement concerning the what and how in our journey (The Hitchhikers Guide to Lean). Leadership is an act and must be modeled. Our lean leaders are growing as teachers, while building tension and a sense of dissatisfaction with our current state.

Everyone in leadership and the organization are beginning to see lean and continuous improvement as being a thinking system and not just a flavor of the month “doing” system. In addition, each team member has come to realize that the lean development manager is not solely responsible for lean implementation. Our culture of striving to standardize and make some small improvement on a daily basis will continue to be our kaizen focus in the pursuit of excellence.

“Everyone in leadership and the organization are beginning to see lean and continuous improvement as being a thinking system and not just a flavor of the month “doing” system.”

Lean Learning Center Announcements

Open Enrollement

Lean Value Stream Improvement
October 25, 2010

Lean Experience
July 26, 2010
September 13, 2010
November 1, 2010
December 13, 2010

Leading Lean
October 27, 2010

Lean Kaizen
September 27, 2010



For more visit
www.leanlearningcenter.com

Lean Learning Center

40028 Grand River Avenue
Suite 300
Novi, Michigan 48375

Phone: 248-478-1480
Fax: 248-478-1589

Email: info@leanlearningcenter.com

Products

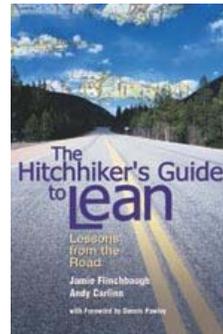
The Mouse Trap Experience



The Beer Game



The Hitchhiker's Guide to Lean



Single Point Lessons



The Lean Learning Center is one of the most recognized and premier lean consultancies in the world. With on-site assessment and consulting at client locations, an adult-learning-designed Center in Michigan and custom curriculum developed through an Instructional Design Studio, the Center brings unique lean understanding in creative ways to executives, managers, supervisors, change agents and front-line employees at clients including many Fortune 500 companies in a range of industries. The company combines consulting expertise and a unique learning environment with educational techniques that facilitate discovery to drive cultural and organizational transformation resulting in maximum sustained performance.

