Home Lean Home
by Bob Zaruta, President/CEO, NWIRC

For this, my inaugural article in The Advisor, I thought appropriate to continue my story and get a little personal. If you saw last month’s publication announcing my appointment as the new President & CEO of NWIRC, you will recall reading that my wife, Debbie, and I are in the process of moving to Erie, PA. As I’m writing this, we (mostly Debbie) are deeply entrenched in that process. When you are reading this, that traumatic event should be behind us and never to be repeated again.

Anyone who has moved their household contents, or even a son or daughter’s belongings from the homestead to a college dorm, knows the hard work and pains involved. In our case, accompanying the 35 years of so many wonderful memories in the same house was the accumulation of seemingly as many items, our “cherished memorabilia”. This collection, as proud parents wanting to hold onto everything we could, was enhanced by deposits made in our basement and attic by our loving three sons during their college, law school and medical school days. You get the picture – many items stored, many not touched in a long time, mixed, unorganized, and in some cases unusable.

We have all heard of Lean Manufacturing, Lean Office, and Lean Healthcare. What about Lean Home? During my 16 years at the IRC in northeastern Pennsylvania, I communicated the importance of Lean and helped many manufacturers start and continue their Lean journey. To help me in my efforts, I often used an illustrative tool appropriately (and ironically) titled the House of Lean, which depicted the various components of Lean within the framework of a house. One of the key building blocks is 5S: Sort, Set-in-order, Shine, Standardize, and Sustain. How humbling.

Before I continue, please don’t get the sense that we are completely negligent. To the contrary, the visible areas of our home were well maintained thanks mostly to Debbie, even though she is a big fan of knickknacks, pictures, and little stuffed animals that prominently adorned our abode. It was the non-traffic and storage areas where things got out of control. This is where we failed to Sort and remove unneeded items, failed to Set-in-Order the items to keep, and failed to Shine and keep items arranged and in ready to use condition. Surely over the years we threw many things out, reorganized closets, and cleaned and rearranged the attic, basement, and garage. Heck, I even created a Shadow Board (a popular tool of Lean) with outlines of my handyman tools so I could hang them when not in use and find easily when needed. Our shortcoming is that we failed to Standardize and have a process for the above 3S’s, and we failed to Sustain the process.

We have been very busy Sorting, Setting-in-Order, and Shining the things important for us to keep and move to Erie. Nothing innovative about it and we can’t take the credit, as Plato says “necessity is the mother of invention”. However, as the clutter is removed from our lives we are feeling an increasing sense of peace and contentment. We vow never to go through this again, so we plan to Standardize (have a process going forward) and be committed to Sustaining that process. If we are successful in this part of our 5S endeavor, we will most certainly take the credit. Wish us well. I plan to be very visible in the 13-county community representing the NWIRC. When we have the opportunity to meet, feel free to ask me how Debbie and I are doing with our Lean Home.
Build a Solid ERP Workforce with Supply Chain Education
by Alan Lupas, Meaden & Moore

A brief video found on YouTube, called “Power of the Market-The Pencil”, features Milton Friedman stating that “there’s not a single person in the world that can make this pencil”. He goes on to explain what it takes to make a pencil from the wood, lead and rubber to paint and glue, as well as all the people involved. The video exemplifies all of the resources required to manufacture something as simple as a pencil, thus signifying the interdependencies of the global supply chain.

Some of these basic concepts may be obvious, but organizations seeking supply chain optimization must go beyond the basics. A critical step includes establishing specific terminologies with clear definitions that are understood both inside and outside of the organization. This is the purpose of a basics of supply chain education program. One of the priorities should be developing a well-trained team that knows and understands the features and functions of the company’s enterprise resource planning (ERP) solution. Whether you have an expensive and comprehensive ERP platform or one that is homegrown for a specific process, part of the knowledgebase should be a solid understanding of industry standard terminology that ERP software typically assumes. If this knowledge is not developed or is lacking within your enterprise based on the basics of supply chain management (BSCM), you may experience slower adoption by various user groups which means slower payback or return on investment (ROI).

BSCM education prepares key employees with foundational understanding and knowledge by laying the groundwork for terms, such as: ERP, BOM (bill of materials), MRP (material requirements planning), BOL (bill of lading), Traveler, Work Order, Sales Order, Routings, and Infinite/Finite Scheduling. This background is especially helpful when an internal ERP implementation team is assembled so they have specific goals and purpose of what needs to be accomplished.

A basic understanding of supply chain management will also help your team gain appreciation for both upstream and downstream tasks and how they affect overall throughput and customer satisfaction. Here is a snapshot of some additional advantages for building team knowledge of BSCM:

- Creates a common language on the shop floor and in the office to help ERP systems move forward
- Reduces confusion and miscommunication that leads to less involvement and slower adoption of new systems and processes
- Provides basic understanding of order process flow from receipt through fulfillment
- Sets fundamental understanding of how an organization functions, both internally and externally, to meet customer demand
- Increases internal productivity and efficiency

The overall goal and benefit of all the above is ultimately to reduce costs which increases profitability.

Alan Lupas is Senior Manager of Business Development at Meaden & Moore Business Solutions. He has over 33 years’ experience in sales, marketing, and business development in small to mid-size manufacturing, distribution, and information technology.

Side Note: NWIRC will offer a 3-day Basics of Supply Chain Management course starting on October 25th. This class is developed by APICS (American Production and Inventory Control Society), a professional association dedicated to supply chain management. The class will be taught by Scott Holter, a Certified APICS Professional from Meaden & Moore. He has been teaching and helping people learn more about BSCM for over 20 years.

Are You Missing the Mark?
by Laurie Barcaskey, President, Leading Marks LLC

Marking is more in demand today than ever before. While marking for automotive and food-related recalls are most familiar, the marking applied to products we use every day are vital to the business bottom line and the safety of us all.

Industrial identification helps ensure the correct components are being assembled, tracks the material and date production, and can even indicate the line or operator involved in production. Construction is made simpler when...
Missing the Mark (continued from Page 2)

structural steel sections are marked with piece-part identification helping the operator erect beams correctly. It’s easy to find other examples of the marks around us. Look at the utensils or condiments in a restaurant; shovels, rakes, and hoses in your yard; and appliances in your home.

More and more industries are requiring products to be marked with machine-readable codes that can be quickly scanned to obtain critical data or to minimize liabilities that impact the risk associated from material defects or operational design failures. Many industries already have established guidelines for the marking of products and are governed by industrial agency oversight. The American Petroleum Institute has strict requirements for components used by the Oil & Gas industry, as does the Association of American Railroads that governs the specifications related to freight rail vehicles and transit lines. These are just some examples of organizations that set criteria for the details to be marked, where the mark is expected to be found, and the method for which it should be applied.

How the product gets marked takes into consideration the type of material being marked, the amount of information that needs to be marked, at what point in the production the marking will be made, the cycle time available to apply the mark, and how long the mark needs to survive. While direct-part marking is the most permanent identification, some products may be at risk of stress fractures or surface deformation with these processes. Therefore, inks, labeling, or tags may be more applicable. Options for the ink/paint formulation, adhesives and/or retention devices are available, and again take into consideration the application and environment for which the component will be used.

Now that more and more parts are marked with the addition of bar codes, organizations often struggle with how to capture and use the data. Smart devices and bar code scanners that interface with databases allow quicker capture of the data for post-processing requirements. Machine-to-machine communication in production lines has advanced the exchange of data and trigger the marking processes, capture inspection data, and more. Organizations are looking to incorporate technologies like lasers and thermal transfer labeling to their testing stations where the products are inspected for pass/fail quality details. Others are seeking ways to allow robots to present product to the marking station, and then move it further along the production line – all with the help of machine readable bar codes.

Manufacturers find quick return on investment through reduced part handling and establish critical historical data when failures occur after the product has been placed into service. Recalls can be minimized to specific lots, batches, or dates. The level of risk can further be reduced when production line and/or operator identification is included in the codes for traceability. As industry requires marking more often, the demand for knowledge about the various identification technologies is essential for multiple levels of an organization. Manufacturing engineers need to consider where the markings may be applied and at what point in production, safety teams need to ensure equipment is ergonomic and equipped with the proper OSHA compliant guarding or controls, maintenance needs to factor in preventative maintenance scheduling, and management needs to evaluate the return on investment.

Needless to say, industrial identification has moved beyond the days of ABC’s and 123’s. Ask yourself if you’re missing the mark.

Laurie Barcaskey, President of Leading Marks, has 30 years of experience and shop floor knowledge of solutions for industrial identification and part traceability. She is the third generation of one of the marking industry’s most innovative and enduring family legacies. Contact her at laurie@leadingmarks.com.

Webinar Briefings Scheduled to Review Program Details

NWIRC will facilitate a 15-minute webinar briefing each week in September to review details of the STEM Manufacturing Internship program, including examples of qualifying projects and the easy process to connect your company with STEM students from across the region. The program has helped companies accelerate technology development and address process and technology-related issues with significant and quantifiable results, like increased productivity and decreased costs.

Below is the webinar schedule:

- Wednesday, September 7 • 9:00am
- Thursday, September 15 • 3:30pm
- Wednesday, September 21 • 12:00pm
- Tuesday, September 27 • 2:00pm

To learn more, visit www.nwirc.org/events to register for one of the sessions.
YOUR STRATEGIC BUSINESS ADVISORS

If you have questions, or would like to speak with someone from NWIRC about services, please contact your Strategic Business Advisor:

**Tom Weible**  
814.590.5202  
Cameron, Clarion, Clearfield, Elk Jefferson, McKean & Potter Counties

**Susan Hileman**  
814.572.2077  
Crawford, Forest, Mercer & Venango Counties

**Ed Barthelmes**  
814.923.3084  
Erie & Warren Counties

UPCOMING EVENTS

**HR Forum: Transferring Training into Results**  
Sept 15, 22 & 29  
Locations: Erie, Clarion, Warren  
Training is a significant investment for organizations. This program will focus on how to make learning pay off in the workplace after the classroom sessions are over. Content includes: measuring ROI of training, what type of training is best for your situation and environment, what leaders can do once the training is complete, and more.

**OSHA Compliance and Injury Prevention**  
Sept 8, 27, & Oct 13  
Locations: Dubois, Erie, Franklin  
Prepares organizations to deal with regulatory compliance, injury prevention, and business liability. Course includes the new Silica standard, Electrical Hazard Awareness, Medical Record Access, and revised Record Keeping & Injury Reporting standard that will impact all manufacturers with 20 or more employees.

**Root Cause Analysis**  
October 11  
Location: Meadville  
Discover a disciplined approach to problem solving. Once a root cause is identified and remedied, final system outcomes improve - reducing the risk of reoccurrence. Learn the process, how to identify possible causes, and methods for data collection and analysis.

**Selling Your Edge**  
October 19  
Location: Titusville  
Learn an effective approach to improve your sales team’s efficiency. Focus on a systematic approach to selling rather than ‘quoting and hoping’. Participants will apply principles of lean manufacturing to selling by developing a repeatable process and reducing waste. Featuring a Sandler Certified Instructor.