2 Second Lean Insights

by Bob Zaruta, President/CEO, NWIRC

The month of August marks a summer break for both of our Lean Together™ working groups. A good time to reflect and plan for the company visits in the coming months. Since initiating Lean Together™, we have spoken with many companies about their journey in 2 Second Lean (a book by Paul Akers)…some participating in our working groups and some not. One of the companies, American Turned Products (ATP), has been into 2 Second Lean for 3 years and they have some great insights. Scott Eighmy, ATP CEO, said, “the hardest part is getting started and there are a few basic and critically important things that must be in place to be successful.” Here are the three things he advised:

1) Top management must be ‘all in’!
   Sounds simple, but 2 Second Lean will not work without it.

2) Managers must read the 2 Second Lean book and have a basic understanding of the process.

3) Commit to having daily communication meetings. Understanding the book and the 2 Second Lean process is very simple. The ‘buy-in’ and commitment are tough, but 100% necessary to make it work.

ATP noted that their biggest success in going through this process is a change in culture and improvement in overall communications within the company. Their daily meetings evolved from 30-40 minutes to 10 minutes or less, and are very productive. Scott says they have a long way to go, but all they need to do is get better every day.

Many of the companies we spoke with mentioned the daily meetings as a key to getting started and that the key challenge is employee attitudes and participation. The team at Viking Plastics has been an inspiration to many companies starting to implement 2 Second Lean. CEO, Kelly Goodsel, and Engineering Manager, Shawn Gross, have spoken for our Lean Together™ kick-off meetings and have also opened their doors for a session. Their team is proud of their continuous improvement accomplishments to the extent of posting successes on social media. Recently they posted, “We have a fix what bugs us” mentality. Working together and keeping our team on the same page is important to the success of our lean journey”. This post included a video of employees fixing a cart that was very difficult to push. This demonstrates that 2 Second Lean really is about the small wins.

We are excited about the 2 Second Lean discussions and ‘Go to See’ visits at companies in the coming months. A new Lean Together™ working group will be forming soon for Elk and Clearfield counties, so manufacturers in those areas…start thinking about ‘What bugs you?’ and contact us to get involved.

A Lean Financial Statement

By Jean Cunningham, President
Jean Cunningham Consulting

A lean financial statement is one of the elements of lean accounting. Adopting lean accounting has two broad goals. First, it uses lean concepts and tools to improve the accounting operations: paying bills, collecting money, closing the books, etc. Second, applying lean accounting creates an accounting and reporting structure that supports and strengthens the effectiveness of the operational lean transformation. Lean financial statements span both of these lean accounting goals.

A main reason that people are interested in adopting lean financial statements is to eliminate the use of standard cost accounting for evaluating manufacturing performance. By eliminating standard cost accounting:

1) Information provided to operations is no longer confusing and often indecipherable (i.e. useless).

continued on Page 2
2) The wasteful and costly non-lean behavior of building excess WIP and finished goods inventory is no longer numerically supported. (Even buying excess raw material can be supported by traditional financial statements if raw material is burdened upon receipt!)

3) Accounting operations are simplified and less time-consuming since variances are eliminated, and thereby, are not analyzed, scrutinized, allocated and capitalized.

In addition, there are many other elements that can be used to evaluate a financial statement to see if it is utilizing lean concepts and/or supporting lean improvement efforts.

First, who is the customer of the statement and what information do they need? Don’t assume. Do a fact finding activity, and you will be surprised. Are they using the information to improve decision making? Is the information at the level of precision that the customer needs? For instance, if the customer wants information at the $1000 level of accuracy, is the accounting team working at the $10 level of accuracy?

When does the customer need the information? If information is only available monthly, is that frequent enough? Is there some information needed more frequently (daily or hourly) and/or some that is needed far less frequently (quarterly or annually)? Have you created the flow that matches the need?

Next, does the financial information use terminology understood by the customer or terminology understood by the accounting department? If the words or phrases used to describe the information are vague or confusing to customers, they might not know what actions they should take to positively affect the outcome results. And, if the financial information does not enable the customer to make better decisions, it is of no value. A great way to test if you have well understood terminology on metrics or reports is to ask five different people the basis of the calculation for a selected metric. If you get 5 different answers, it is too complicated.

There are many other questions to ask when evaluating your statement. Is the information organized into meaningful value streams or is it “silied” by manager? Can we see the value created by the value streams? Is there any connection to your outputs? Is it aligned with how you have changed to manage the lean company?

Are there lots of allocations? Who needs this info? What effort does it take to allocate? If you do want to allocate, is it easy to tell that it is allocated versus direct information? Who has the responsibility for allocated activities? What would happen if it was not allocated?

Are you looking for the 8 wastes in the creation of the lean statements? Are there Defects? Are you Over producing reports? Are your customers Waiting too long? Are you Neglecting to provide meaningful feedback? Is the information electronically transported from system to system or entered manually? Is there a valuable Inventory of knowledge sitting in one department that another department needs? Is there excess Motion to get the reports created and stored because of paper documents? And is there Excess processing by doing tasks and calculations no one really uses or at a time consuming level of precision not needed? All these wastes lead to DOWNTIME in supporting the drive for excellence in the accounting department and the overall enterprise.

These are a few of the many inefficient and waste areas you will eliminate by building towards and using lean financial statements. Go for it.

Jean Cunningham is President of Jean Cunningham Consulting and former CFO of two manufacturing companies. She is co-author of Real Numbers: Management Accounting in a Lean Organization, as well as other books.

Side note: NWIRC will host a Lean Accounting course with instructor, Jean Cunningham, on October 24th in Erie.

Bound Metal Deposition Uses MIM to Create New Metal 3D Printing Process

by Dave Macfie and Shawn Spinneweber, Cimquest

The advent of metal 3D printing, also known as additive manufacturing, has promised to dramatically change the way products are made. The benefits are: the reduction or elimination of up-front tooling and increased complexity due to the removal of conventional manufacturing constraints which lead to shorter lead times, part consolidation, and weight reduction. Today, metals represent one of the fastest growing segments in 3D printing globally. Shipments of metal 3D printers increased by 51% in 2015, compared to 2014, and they continued to climb in 2016. Various research firms project additive manufacturing will be a $20B industry by 2020. (Source: Wohler’s Report 2016). While global metal manufacturing is estimated to be a $1 trillion industry.

continued on Page 3
In spite of this growth, metal 3D printing options have not been accessible for the majority of manufacturers due to their cost and operational complexity. In addition, most technologies have relied on slow, laser-based processes that demand high levels of manual labor such as removal of metal supports with CNC. Handling the metal powder also poses health and safety issues which require a larger investment in equipment and facilities. For these reasons, metal 3D printing has been used almost exclusively for “high-value” applications such as body implants, aerospace applications and other products that are highly complex and produced in low quantities or require a high degree of customization such as patient specific devices in the medical industry.

So how might metal 3D printing become more accessible for engineering teams? When will it be fast enough and cost-effective enough for mass production? A company in Massachusetts, Desktop Metal, might have the answer. They recently introduced a technology called Bound Metal Deposition (BMD) which leverages the metal injection molding (MIM) process.

MIM is a proven manufacturing technology that has been used for 40 years to create complex metal parts much like plastic injection molding. The process consists of mixing metal powder with a plastic binder that is shot into a precision mold creating a “green” part. The green parts are made larger to compensate for shrinkage and final part geometry and density are achieved by binder removal and sintering. MIM requires up-front tooling which adds to the lead-time and part costs. Larger quantities of parts are generally required to amortize tooling costs, as such; the process is not great for low-volume production or prototyping.

BMD is similar to the safest and most widely used 3D printing technology; Fused Deposition Modeling. With this process, the metal powder and binder are pre-mixed and formed into rod stock. When combined with MIM, BMD is used to shape (3D print) the “green” parts thus eliminating the need for tooling. Metal parts can be printed one at a time for prototypes or up to hundreds for low-volume production. For mass production, another technology; Single Pass Jetting (SPJ) will be introduced next year. SPJ will build metal parts up to 100x the speed of today’s metal 3D printers and also leverages the MIM process. These technologies are the beginning wave of how metal parts will be prototyped and manufactured in the near future.

Dave Macfie has a degree in Mechanical Engineering from New Jersey Institute of Technology. For the past 20 years he has educated companies in various industries about the benefits of additive manufacturing (3D Printing) for conceptual prototyping as well as an alternative solution for creating manufacturing tools. Shawn Spinneweber has a degree in Machine Drafting & Design and is a Tool & Die maker and has spent the last 25 years in training development, educating and consulting manufacturing processes.

Side Note: NWIRC will host Cimquest and their manufacturing partner, Desktop Metal, for a presentation and discussion about some of the newest metal 3D printing solutions. Discussion will include the process, materials and how this technology will impact prototyping and manufacturing of metal parts. The free program will be held in Erie (Sept 12) and St Marys (Sept 13). All the event details are at www.nwirc.org/events.

PA Chapter of WiM Plans Next Meeting in Erie

Women in Manufacturing™(WiM) is the only national trade association dedicated to supporting, promoting and inspiring women who have chosen a career in the manufacturing industry. The next meeting for the Pennsylvania Chapter of WiM will be held in Erie. The meeting is planned for September with details to be announced very soon. Please watch our social media channels for details or email shileman@nwirc.org.

Dream It Do It Update

Become a sponsor

The What’s So Cool About Manufacturing student video contest is coming to Erie County. While we gear up for getting the middle schools engaged with the contest, we are looking for companies to get involved. This is a great opportunity to help change the perceptions of manufacturing careers among students, parents, and teachers. Visit www.nwirc.org/dreamit for details on becoming a sponsor or contact Laurie Knoll at (814) 898-6955.
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:

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Ed Barthelmes
814.923.3084
Erie & Warren Counties

UPCOMING EVENTS

Sales Process Mapping Workshop
Aug 24, Sept 26
Locations: St Marys, Titusville
This 1-day workshop will help your organization become more proactive, qualify leads more effectively, and stay in alignment to your customers buying process, both procedurally and behaviorally, for greater efficiency.

IATF 16949:2016 Internal Auditor
Aug 8-10
Oct 3-5
Locations: Erie, Meadville
Training of this automotive standard will provide understanding of quality management principles in context with ISO 9001:2015 and the IATF 16949:2016, along with techniques of process-based auditing. Compliance to this new standard is required by Sept. 2018.

TWI: Job Instruction
Sept 6-8
Location: Erie
Job Instruction requires you to identify the ‘one best way’ and train to that way. This 2 1/2 day class teaches the method to instruct operators how to perform a job correctly, safely and conscientiously. Benefits experienced when practicing Job Instruction are reduced training time, less scrap and rework, fewer accidents, and increased job satisfaction.

ISO 9001:2015 Internal Auditor
Sept 12-14
Oct 17-19
Location: St Marys, Erie
This 3-day course will provide a detailed review of the quality standard, including the most recent changes. Participants will learn how to conduct an audit, write the audit report, take corrective actions, and more.

For more information or to register for training, visit www.nwirc.org