One Page Manufacturing Technologies Guide

written by admin | January 22, 2018

A rapidly evolving part of advancing your Continuous Improvement (CI) system, specific practices and initiatives is understanding the various technologies that can be applied to support solutions. This technology advancement is a big deal but can get messed up (lose money) or be very beneficial (make money). And your role can have much to do with it going well. That starts with emphasizing that without good "CI systems thinking and A-3 / PDCA type methodology", the selection and application of process improvement technologies is likely to be messy or even misguided and costly.

Click here for a one page illustration that I got from a McKinsey article. I like the concept, the way it's organized. You'll see that the "wheel" advises about what types of technologies (hard and soft technologies and practices) align with what type of applications starting with most general at the hub and then working out to more specifics. I'm finding it a nice resource for thinking about what applications might fit for what needs and opportunities. It could also be used to help identify what technologies and associated practices you and your organization might want to learn more about or not (people / skill development).

Keep in mind that being a "CI Manager" has much to do with getting your company to become more of a learning organization. And you have to be selective about that – as in advancing your knowledge primarily on things that will improve efficiency and effectiveness – i.e., business results.

Collaborative Robots and Lean/Continuous Improvement

written by admin | January 22, 2018

I attended a collaborative robots (cobots) event yesterday that IMC cosponsored with the PA CareerLink for Columbia/Montour Counties and thought it worth a few observations within the context of lean/ continuous improvement.

The Perfect Process

Let's ask ourselves… What is the perfect production process? Well, a process that's being performed the "current one best way" (standard work) in a way that is 100% repeatable and predictable with no variation *AND* that can adapt if there are changes required *AND* can be continually improved.

We'd all love to have that, right? As we say, Lean/CI is about aiming for perfect yet knowing it isn't achievable (a golf score of 18). It's in the CI efforts that we keep getting closer and succeed as a result.

How Cobots Might Help

Cobots are a developing technology that can be an important part of our CI efforts. They're designed to work alongside people and to be able to do specialized tasks that may be mundane (lower value work) or unsafe (repetitive motion) or need to be very precise. They're small enough that they can be picked up and moved around easily and safe enough that they don't usually need guarding.

So if you think about Problem – Causes – Solutions (PDCA or DMAIC). Cobots can be a solution ***in the right situation***. But the key to successful application is to start by doing a great job of identifying the right problem, getting to root cause and then considering and prioritizing solutions. *Not* jumping to an assumed solution that a robot will save the day (oh yeah, we never do that).

Lean/CI More Than Ever

Like anything new, these technologies have the potential to separate winners from losers. And the winners will be the ones who have that CI operational culture and practices first and then apply cobots and other technologies as solutions to effective Lean/CI efforts.

Consider Getting to Know Cobots

My advice would be to identify an internal resource to stay attuned to this continually emerging and developing technology. Below is a link to an organization and a book called "*Lean Robotics*" that was mentioned yesterday by the presenter from Universal Robotics. I haven't read it but plan to check it out. https://leanrobotics.org/.

Millennials, Hiring & Retention

written by admin | January 22, 2018

Dear Manufacturing Leaders – Much talk about millennials these days and in particular as relates to manufacturing. Below is a link to a pretty good article about attracting and retaining people and millennials in particular – the fastest growing generation in the workplace. Jeff Kopenitz mentioned this fellow Jason Dorsey as the guru of workplace generational considerations. Other good stuff related to the subject on this site.

Click here to read "Unlocking Millennial Talent.

Two thoughts having just read it.

1. Millennials are clearly less willing to accept a "just do your job" type of workplace experience. Good for them.
2. The "key organizational capabilities" for business success in today's more complex, competitive and fast-changing world – *system-wide continuous improvement and innovation* – are exactly aligned with what millennials are

> looking for. So in getting really good at systematic process improvement (Lean/CI) and product & service reinvention (innovation), you also create a workplace that attracts and retains the most talented young people. That's winning.

Also FYI, we recently developed a *template of a selection and retention improvement strategy*. It's something that I think any company could work from to develop a company-specific selection and retention improvement strategy. Let me know if you'd like a copy.

Frank Demmler: It's not your parents' funding environment

written by admin | January 22, 2018
(By Lee Stabert on May 17, 2016)
FRANK DEMMLER is Vice President of Entrepreneurial Services at Innovation Works (Ben Franklin Technology Partners of Southwestern PA). In his 30-year career, he has worked with over 3,000 entrepreneurial efforts, leading to the formation of over 500 companies. These businesses have gone on to create more than 12,000 jobs and raise more than $2 billion dollars of investment capital.

Frank Demmler

If you're over 40, like me, it seems like the world of investing has turned upside down in recent years. If you're under 40, these changes might seem natural for an increasingly connected world. In either case, the next wave of crowdfunding is poised to present big challenges and bigger incentives for startups and investors alike.

In April 2012, the Jumpstart Our Business Startups (JOBS) Act was passed, creating a legal framework for crowdfunding, replacing laws that had been in existence since 1933. The resulting crowdfunding culture — which has garnered widespread mainstream attention — provides entrepreneurs unprecedented access to a huge pool of potential investors. It's no surprise then that this trend has given rise to even newer solutions that pull accredited investors into the fold as well.

Today, both laymen and accredited investors have legal, effective ways to support companies they believe in, whether it's for the personal gain or the public good.

New Incentives for Investment

One fundamental difference between mainstream crowdfunding and traditional fundraising is that the former does not involve the sale of equity in the company. Instead, crowdfunding campaigns often appeal to a social mission or personal interest, offering the investor SWAG ranging from promotional items like coffee mugs to pre-paid orders for in-development products. Platforms like Kickstarter and Indiegogo are now household names, delivering investment opportunities to a larger base of users with less to spend than traditional investors.

Whether it's a board game or new technology for doctors, startups can now use the general public as a sounding board for their boldest ideas. When Oculus Rift sought investment from accredited investors, the risk appeared too great. When the company shifted gears and ran a Kickstarter campaign, 9,522 backers provided $2,437,429 in funding.

The act of crowdfunding itself provides a wealth of information that traditional investors can use to evaluate the viability of products and services. What better proof is there than customers willing to buy something that doesn't yet exist?

It also offers traditional, accredited investors a sample of customers who have already used the product; helps demonstrate the company's ability to produce and deliver on its claims; and provides a sense of how company management performs under pressure. And because crowdfunding campaigns have a fixed duration, they can provide a more predictable timeline to market: If it works, great. If it doesn't, move on to Plan B.

Investor Matchmaking

The new digital landscape also offers opportunities to traditional, accredited investors. Typically, a website — such as AngelList or IdeaCrossing — will establish itself as a market maker by meeting SEC requirements. These websites have garnered significant coverage in the media as of late; some specialize in specific sectors such as entrepreneurship in emerging nations or social impact startups.

Once an individual is confirmed to be an accredited investor — with annual income over $200,000 and/or a net worth of $1 million, among other requirements — they can register on these sites and connect with companies.

The rise of this model has spawned some interesting trends: Often times, a well-known angel investor will commit dollars to the company, then promote their support of the company to their connections. Ideally, this will result in a wave of additional support. Without such a benefactor, these websites still offer startups significant value through a centralized, digital system that integrates fundraising documents and other key information.

Retail Crowdfunding

Where investor matchmaking services and mainstream platforms fall short, retail crowdfunding may fill in some gaps, allowing unaccredited investors to buy actual stock in emerging companies. These opportunities, unsurprisingly, come with a laundry list of requirements: Companies can only raise up to $1 million. No one individual can invest more than $100,000. Individual investment caps are also placed on individuals at different income levels. To make matters worse, these limitations apply to all private investment, not just the current company's offering.

For technology-based early-stage companies in particular, retail crowdfunding presents complexities and bureaucracy that may stifle its efforts to secure follow-on funding. (It's estimated that it can cost between $50,000 and $100,000 to satisfy these requirements.) For companies that don't anticipate needing more than $1 million in investment annually, retail crowdfunding may prove a viable option.

Ultimately, the new legislation and landscape offer entrepreneurs another way to raise money and build their companies — that's a good thing. But planning, documentation, reporting and communication are poised to become make-or-breaks for startups moving forward. It's a brave new world.

OSHA Finalizes New Workplace Injury Reporting Rule

written by admin | January 22, 2018
(By Paul Clouser on May 11, 2016Posted in Workers' Compensation)
On May 11, 2016, the Occupational Safety and Health Administration ("OSHA") finalized a recordkeeping and reporting rule that will require covered employers to take the additional step of electronically submitting to OSHA, injury and illness information that is required to be maintained under existing OSHA regulations. The rule becomes effective January 1, 2017.
The new electronic submission requirement applies to: (a) employers with 250 or more employers who are currently required to keep OSHA injury and illness records (i.e. OSHA forms 300, 300A and 301) and (b) employers with 20-249 employees in certain industries with historically high rates of occupational industries and illnesses. The electronic submission requirements do not alter the employer's obligation to complete and retain injury and illness records, as before. For illnesses and injuries occurring in 2017, the electronic submission deadline is July 1, 2017.

Believe it or not, OSHA plans to post the injury and illness data it collects on its public website (www.osha.gov). OSHA has indicated that it will remove any personally identifiable information ("PII") before making the data available to the public. States that operate their own job safety and health programs (i.e. OSHA state plans) must adopt requirements that are substantially identical to the new rule within six (6) months.

The new requirements introduce a public watchdog role. Apparently, this role is being added in response to the near doubling of the number of workplaces in the

U.S. from 1981 to the present, and the corresponding decrease in the ratio of OSHA inspectors, to one per 4300 workplaces (according to a study by the Center for Effective Government).

The rule also bars employers from retaliating against workers for reporting workplace injuries and incidents, thereby creating a supplemental avenue for disgruntled workers who are inclined to pursue a wrongful discharge cause of action, in addition to more traditional workers' compensation claims, for alleged workplace injuries.

The net effect of the rule may be to spur additional employment lawsuits, by making it easier for plaintiff lawyers to mine for accident information.

We will keep you apprised as to further developments, but in the interim, please feel free to contact any member of our Labor and Employment Group, with questions or concerns.

DOL Releases Updated FMLA Materials

written by admin | January 22, 2018
(By Joe Sileo on May 18, 2016Posted in Employer Liability)
The United States Department of Labor (DOL) recently issued a new Family and Medical Leave Act (FMLA) poster. Employers who are covered by the FMLA are required to display a DOL-prepared poster advising employees and applicants of the major provisions of the Act.
According to the DOL, for now an employer has the choice to continue to use the prior version of the poster (dated February 2013) or to use the new poster (dated April 2016). Even so, use of the new poster is recommended because it is better organized and more user-friendly. It is also generally advisable for employers to use the most current version of required postings. The new poster can be found here,

free of charge.

In addition to the new poster, the DOL has also issued a new Employer's Guide to the FMLA. The guide is intended to provide employers with information concerning their obligations and options for administering FMLA leave. The guide is available here for free download.

Sustainability Goals in the Supply Chain

written by admin | January 22, 2018

More companies have moved beyond paying lip service to sustainability to embracing it and tracking its return on investment.

(Supply Chain Management Review – Jim Barnes and Bob Trebilcock: 5-16-16)
Why are more companies embracing the principle of sustainability? What prompted them to move from merely paying it lip service as something "nice to do" to formulating new accounting line items to track its return on investment? At the Institute for Supply Management, we believe companies made the change because they realized sustainability goals are:

- Necessary because consumers are demanding attention be paid to sustainability and the government is regulating efforts to uphold it.
- Prudent because they can help save millions of dollars.
- Crucial to protect the environment for future generations.

According to the Environmental Protection Agency, "Sustainability is based on a simple principle: Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. To pursue sustainability is to create and maintain the conditions under which humans and nature can exist in productive harmony to support present and future generations."

We're seeing many companies build sustainability goals into their supply management objectives. Equally important, they expect their suppliers to do the same. Some of the leaders in this effort are:

- **Pepsi-Cola**: as part of its "Water Stewardship" Program, it's reducing the amount of water to produce soft drinks from about three gallons per bottle of soda to less than two gallons per bottle.

- **Subaru**: its commitment to be "America's first 'Zero Landfill' automaker" by recycling or reusing all its waste products is making it a favorite of millennials as they shop for cars.

- **Repurposed Materials**: this company turns one company's would-be trash into another company's useful product and as a result, has seen its operation grow from one site in Denver to four more in Atlanta, Philadelphia, Chicago and Dallas.

- **Packaging company Sonoco**: it operates by the statement "Every day, we commit ourselves to the singular notion that smart packaging is more than plastics, cardboard, and paper – it's a promise to people, products and our planet," and expects its suppliers to as well.

As we've talked to companies like those four and other leading authorities on sustainability efforts, we've garnered four best practices procurement professionals should consider to successfully incorporate sustainability goals into their supply management objectives.

The first best practice is *adopting specific reporting methods* that will demonstrate a company is paying much more than just lip service to sustainability efforts, including:

- Fact-based reporting;
- Tracking greenhouse gas emissions data; and
- Triple bottom line (TBL) accounting of economic, environmental and social impact.

Gathering and reporting this type of data provides benchmarks to keep internal efforts on track toward achieving sustainability goals. It also can be reported out to critical audiences such as consumers and regulators.

The second best practice we've found among successful companies is that they *conduct Life Cycle Assessments* (LCA) to determine the environmental impact of their products or services from cradle to grave. These impacts include "the extraction of raw materials; the processing, manufacturing and fabrication of the product; the transportation or distribution of the product to the consumer; the use of the product by the consumer; and the disposal or recovery of the product after its useful life," according to Tellus Institute, a not-for-profit research and policy institute that is a leader in the field of sustainable development.

The third best practice of successful companies is *adherence to ISO 14000 environmental management standards* to systematize and improve environmental management efforts.

Finally, we've found the fourth best practice is *following the Five Level Framework* – a model for planning in complex systems – to organize thinking and information to be more clear and strategic in the move toward sustainability. The Framework was developed by scientist Karl-Henrik Robert to set out the system conditions for the sustainability of human activities on earth.

The Five Level Framework consists of:

- Ascertaining the scope of the system
- Defining success
- Setting strategy
- Determining actions to take
- Identifying the tools to use

One of the significant advantages of working through the Five Level Framework is that it enables procurement professionals to think beyond their own company and look at their suppliers as well.

The more companies that pursue sustainability, the more successful each one will be in achieving business goals and protecting the environment. If companies pursue sustainability on a one-off basis, the impact will be small, but if they push it upstream to their suppliers, the network effect will be great.

(Jim Barnes is the Managing Director of ISM Services. Bob Trebilcock is editorial director of Supply Chain Management Review and also Executive Editor of Modern Materials Handling.)

6th Annual Pennsylvania Energy Management Conference

written by admin | January 22, 2018

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The conference organizers have issued a call for speakers with brief abstracts due by Friday, June 24, 2016. Organizers are particularly seeking sessions of case studies of energy savings/efficiency. To submit an abstract/application to speak, please use the convenient online form above and in the right-hand column. A complete agenda, with speakers, topics and times in a PDF format will be posted by **Friday, August 5, 2016.**

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Click Here for more information.

Sponsored by: Industrial Energy Consumers of Pennsylvania (IECPA); Pennsylvania Foundry Association; McNees Wallace & Nurick LLC; and Manufacturers' Education Council In conjunction with: Industrial Resource Center Network — Northeast Pennsylvania IRC, Delaware Valley IRC, MANTEC, Catalyst Connection, IMC – Innovative Manufacturers' Center, NWIRC, and Manufacturers' Resource Center

Manufacturers’ Injury and Illness Records to go Public

written by admin | January 22, 2018

The Occupational Safety and Health Administration (OSHA) has just released its “Improve Tracking of Workplace Injuries and Illnesses” final rule. It will require businesses with 250 or more employees per facility to electronically report to the agency annually all of the company’s injury and illness logs for that year starting in 2017. Companies with 20–249 employees per facility in “designated industries” (manufacturing is one) will also have to report annually.

While the agency states it will not report any specific employee information, as stated in the rule, “OSHA intends to post the establishment-specific injury and illness data it collects under this final rule on its public Web site at www.osha.gov,” which means each company’s record will be available for public consumption. Furthermore, OSHA’s press statement states: “Access to injury data will also help OSHA better target our compliance assistance and enforcement resources at establishments where workers are at greatest risk and enable ‘big data’ researchers to apply their skills to making workplaces safer.”

The administration put a target on nearly every company and manufacturer in the United States. Manufacturers are supportive of regulations aimed at increasing transparency and are proud of creating safe workplaces for the men and women who make things in America. However, this regulation will lead to the unfair and unnecessary public shaming of businesses. This is a misguided attempt at transparency that sacrifices employee and employer privacy, allows for distribution of proprietary information and creates burdens for all manufacturers.

The NAM will look at all options to protect manufacturers from this certain threat to the modern shop floor.

It's Time to Apply for the 2016 Governor's Award for Safety Excellence!

written by admin | January 22, 2018

Shortly over two weeks left to apply!!!

If you're proud of your safety and prevention program for its impact on reducing employee injuries, financial and other achievements, why not apply for the Governor's Award for Safety Excellence? The purpose of the award is to recognize outstanding prevention programs and the superior efforts that make these programs so successful. Companies can nominate themselves or be nominated by a third party.

For more information and to download the nomination form:

Click Here

ALL APPLICATIONS MUST BE SUBMITTED BY JUNE 1, 2016 TO:

Margaret (Peggy) Day
Program Coordinator
Bureau of Workers' Compensation
Health and Safety Division
1171 South Cameron Street
Harrisburg, PA 17104

For additional information or assistance call (717) 772-1917 or email marday@pa.gov