

Build Your Supervisory Skills at our May Workshop

This 4-hour workshop provides an introduction to three simple methods that build supervisory skills. Managers, Supervisors, and Team Leaders have many needs but most critical to the company's success are their skills at:

- **Good Job Relations**
- **Instructing Employees**
- **Making Job Improvements**

Using training materials originally developed in the 1940's by the Training-Within-Industry (TWI) Service, but updated for a 21st century work environment, attendees discover simple methods that could be practiced in their workplace. Sample tools used in each method are provided at the workshop that help attendees immediately start building their supervisory skills.

Are You?

- New to the supervisor role?
- Having trouble supervising others?
- Not getting the most from your employees?

This Workshop Focuses on How to:

- Effectively lead employees,
- create more productive employees, and
- improve troublesome processes.

Learn Supervisory Skills Such as:

- Making decisions and taking action based on facts
- Breaking down a job into important steps & key points
- Instructing employees on important steps & key points
- Analyzing a job to uncover waste
- Identifying ways to improve a job

What will be Covered?

- Job relations
- Job instruction
- Job method improvement

Who Should Attend?

Anyone with direct reports, or anyone who directs the work of others, whether new to the position or in need of a refresher.

DATE: Tuesday, May 19, 2015

TIME: 8:00 am to 12:00 pm
sign-in and continental
breakfast at 7:30

LOCATION: Holiday Inn Express,
Horseheads, NY

COST: \$125 (\$75 for AM&T
Associates)

INSTRUCTOR: Lloyd Johnson (for
more info, call Lloyd at
607-227-6229)

Registration Deadline: May 12

Register on-line at www.amt-mep.org
or contact Kathy Peacock at
607-774-0022 x308



Meet your Instructor: Lloyd Johnson is a graduate of Syracuse University where he earned a B.S.E.E. and an MBA. Lloyd has over 30 years of experience in manufacturing, quality, and program management. Lloyd is a Professional Business Advisor (PBA), a Project Management Professional certified by the Project Management Institute, and is certified to teach Training Within Industry (TWI).



Alliance for Manufacturing & Technology

HOW WE HELP

- Business Assessments
- Strategic Planning
- Lean Enterprise
- Supervisory Training (TWI)
- Project Management
- ISO/AS Quality Systems
- Sales and Marketing
- New Opportunity Identification and Growth — Markets, Products, Services, Customers

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MEP • MANUFACTURING
EXTENSION PARTNERSHIP



Empire State Development
Division of Science, Technology & Innovation

The FMEA Tool: Prevention is Better than Cure!

Failure Modes Effects Analysis or FMEA is a powerful method for understanding potential issues and problems to processes before they happen. Think of it as being a forecasting tool that enables the team using it to design quality and safety into a product and process, thereby eliminating the possible problems that could happen before they happen!

FMEA has been used extensively in safety critical industries such as aerospace, and has become popular in the automotive industry in response to similar requirements.

FMEA Benefits:

- The benefits of an effective and systematic use of the FMEA tool are vast.
- Notwithstanding the obvious benefits above, FMEAs can create smooth production processes the first time, reduced development costs, increased profit margins in production, and the ability to successfully win more business, supplying competitive and long lasting product.

Additional benefits are:

- Minimize product failures
- Early risk identification
- Track process improvements
- Documented evaluation
- Develop efficient test plans

The FMEA tool is a means of identifying failures before they happen by providing a procedure that is built around three key questions:

1. What is the likelihood that a failure will occur?
2. What would the consequence of that failure be?
3. How likely is such a failure to be detected before it affects the customer?

How to Create a FMEA:

- **Review the Process** Map the process in question, step-by-step, capturing every value added activity.
- **Identify Failure Modes** For each process step, brainstorm all potential failure modes (things that could go wrong with that particular activity).
- **List the effects and causes** For each failure mode, list its effect on the output of that process step, and also the real root cause.
- **Give each item a severity score** Rank each failure mode as to how severe the failure mode could be (scoring 1 to 10).
- **Give each item an occurrence score** Rank each failure mode as to how often it will / does occur (scoring 1 to 10).
- **Give each item a detection score** Rank each failure mode as to how easy the failure mode can be detected by the next customer or next internal customer in the process. (Again, scoring 1 to 10).
- **Calculate RPN numbers** For each failure mode, give it a Risk Priority Number (RPN) by multiplying the severity score x occurrence score x detection score. This now allows you to focus on the highest scoring, higher risk problems first.
- **Develop an action plan** For each high scoring RPN, note who is doing what by when to close eliminate the failure modes.
- **Take action!**
- **Recalculate new RPNs** Once action has been taken, recalculate the new RPN numbers. Repeat the steps if further action is needed (if the RPN number is still too high)

Made in the Southern Tier

Increase Your Exposure –
add your company to this FREE directory of manufacturers



AM&T has launched **Made in the Southern Tier** – an online directory that showcases our region’s companies and the vast array of products that are manufactured here.

Inclusion in the directory is free to all Southern Tier manufacturers. Benefits include:

- Enhanced exposure to top-level search engines such as Google
- Greater likelihood that world-wide customers can find you
- Ease of finding regional suppliers and partners for your production needs
- One source for regional companies to find manufacturing suppliers

In addition to descriptive text and contact information, the company profiles include logos, product images, videos, and more – a comprehensive yet compact showcase.

Learn more at www.amt-mep.org. Click on “About the Directory” or “View Manufacturers”.

To qualify for inclusion in the directory, a company must be a manufacturer, with a NAICS code between 311-Food Manufacturing and 339-Miscellaneous Manufacturing. Also, the company must be located in one of the following New York counties: Broome, Chemung, Chenango, Delaware, Schuyler, Steuben, Tioga, and Tompkins. When a new company profile is submitted, it will be reviewed and confirmed by AM&T staff before it appears in the directory.

If you represent a Southern Tier manufacturer and would like to include your company in the directory at no cost, please complete the information form at:

www.blog.amt-mep.org/?p=525

What is Lean Six Sigma?

“What is Lean Six Sigma?” Many small Business owners ask this very question, so this article will give you an overview on what it is and what the benefits are. Lean Six Sigma is often referred to as Lean Sigma, which is a combination of two business improvement philosophies, namely, Lean Manufacturing and Six Sigma.

Lean Manufacturing focuses on waste elimination in the business, and centers activities on questioning all costs associated with producing to customer requirements. In contrast, Six Sigma pursues efficiency improvements by centering its spotlight on process capability and performance in order to optimize the outputs of a process.

Six Sigma uses statistics to understand the blueprint of this process and its performance, and measures this process output over time. Improvements can then be made to reduce the amount of variation from a given process by eliminating those factors which statistically cause variation in the output.

What is Lean Six Sigma? In its essential form, Six Sigma is built around the concept of creating enough process precision so that actual results from that process will only create, on average, 3.4 defects per million opportunities. In other words, if your production line was turning out parts, and you had used Six Sigma to tune and monitor the process, it would only produce 3.4 defects per million parts produced!

Now, imagine that you have “leaned” the same process. You might have have reduced leadtime by 40% through waste elimination.

So, by applying Lean Six Sigma to your production process, you have:

- Increased the speed at which you produce parts by applying Lean principles, and
- created a consistent process outcome, where you would only expect 3.4 defects per million parts produced.

The result – massive gains in profit, and lead time: **competitive advantage!**

The Pareto Principle

Most people believe that to achieve success, one must work tirelessly to the bone, endure pain and a commitment without parallels, go through the hard knocks, and come out a stronger person in the end.

Well, while to experience the above does indeed make you a well rounded and experienced person, what if there are easier routes to achieve your goals? What if you could be more effective in selecting your objectives and destination, and even more efficient when selecting the vital tasks that you know will have the biggest impact in achieving your goals?

This Isn't Pie-In-The-Sky Thinking!

The 80/20 rule or Pareto Principle came from Vilfredo Pareto, a 19th Century Italian economist, who researched Italian land ownership and found that 80% of the land was owned by 20% of the population. He then turned his attention to other countries and their wealth, and a similar finding resulted.

It turns out that most things in life can follow this rule of thumb. Be it in business, your personal life, problems, or whatever – pretty much everything shares the fact that the majority of something is caused by the vital few.

Let's have a look at some examples:

- 80% of work is completed by 20% of your team
- 80% of sales come from 20% of your clients
- 80% of your complaints come from 20% of your customers
- 80% of your problems come from 20% causes
- Even 80% of your success comes from 20% of your actions!

Try it...

Now, not all things equate exactly 80/20. It could be 95/5, or 90/10, but you will normally find that the majority of things come from the vital few actions / causes / sources.

The law of focus – Less is more!

In business improvement, most businesses are harboring typically 95% of waste or non value added activities in their day-to-day processes. That's a lot of areas to focus on and improve profitability and productivity in your business!

Using these principles, you can start to modify things in your favor. What about if you identify the biggest actions that would help you achieve your goals - blocking out the noise of having too many targets? Or if you knew the vital few root causes to a continuing problem?

What if you knew the easiest and most effective route to achieve your life goals?

If you knew you could always get more of the great things that life has to offer, with less effort and cost, would you be interested?

This month, turn your attention to the law of less!

That is, the Pareto Principle. Most people believe that to achieve success, one must work tirelessly to the bone, to endure pain and a commitment without parallels; to go through the hard knocks and come out a stronger person in the end.

If we learn to identify the things that matter most to us and add the greatest value to our lives and the things we believe are the most important, we can discover less is indeed more.

If indeed we know about the Pareto Principle, then we can easily cut the noise out from our problems and highlight the 20% root causes and the 80% impact.

5 Trends to Watch for in 3D Printing in 2015

By Zack Schildhorn

It's been a fast-paced time for 3D printing, with more capital, more companies, and more big ideas than ever. Behind the scenes, we've witnessed no fewer than 50 new ventures raising money in the 3D printing sector. That doesn't include more than 40 crowdfunding projects on Kickstarter alone.

We can expect all of this activity to result in some real landscape changes in 2015. Here are 5 trends to watch for:

1. Better, faster, cheaper

Entrepreneurs are attacking 3D from all angles, with new ways to print, scan, create, and share 3D content. Most efforts to date have focused on consumer-class machines, which generally lack in precision, scale, and material choice compared to their industrial predecessors. Prices are dropping quickly, and competitors are pushing to increase performance, ease of use, and features. With many players and a lack of killer consumer applications, it's going to be a tough landscape for startups, but customers are sure to benefit.

What's ahead: Functional materials are making their way to market. Combined with more advanced printing processes (aided by key patent expirations), 2015 is likely to see much more capable desktop machines emerge. Many startups are also climbing the value chain, working on faster, lower-priced industrial machines. Metal printers in particular are an area of great interest to commercial customers, and I predict 2015 will see the unveiling of much more affordable options (though full commercial availability will take some time).

2. Industry incumbents back down ... and start to step it up

To maintain their dominance in this rapidly growing industry, incumbents 3D Systems and Strata-

sys have pursued a simple strategy: either buy it up, or block it out. Witness: Stratasys merges with Objet and buys MakerBot Industries; 3D Systems sues startup Formlabs (before it ever releases a product). These tactics may be starting to backfire. Integrating acquisitions is notoriously difficult. Having purchased close to 50 companies in the last three years, perhaps it's no surprise that 3D Systems' employer ratings are in the dumps. The last quarter has also been quite unkind to share prices, significantly reducing the purchasing power of these two companies. (3D Systems' suit against Formlabs was also recently dismissed from district court).

Combined with patent expirations, the announced market entry of printer giant HP, and the cumulative efforts of countless startups, the once protected turf of these industry heavyweights is starting to look a lot less defensible.

What's ahead: Incumbents won't wield as much power in the years ahead. Instead of slowing the industry down, they'll need to speed up internal innovation and work to deliver better, less expensive solutions to customers in order to accelerate market adoption. Key areas for improvement: print speeds and material prices.

3. Rise of the 3D photo booth

Get ready for your 3D headshot. Some companies have already started experimenting with in-store 3D booths on a limited scale (see Uniqlo and the MakerBot Store), allowing you to capture your bust or whole body for subsequent reincarnation as a cool miniature statuette.

What's ahead: The increased availability of simple 3D scanning devices and software will make affordable, portable 3D capture setups practical. I expect 2015 to see more serious entrants on a significant scale, so don't be surprised

when you see your first 3D photo booth at a trendy wedding. And of course, if you don't want to shell out for your own printed figurine, your complimentary digital 3D photo will always show your best angle. Most importantly though, these same scan and capture tools are laying the groundwork for mass customization, enabling companies to tailor products for each and every customer.

4. Weapons of war

Anything that can happen probably will. While using the equivalent of a robotic hot glue gun to make a real gun isn't the most effective way to procure a weapon, it certainly makes headlines. A key protagonist in Netflix's *Print The Legend* documentary, gun-rights activist Cody Wilson is, unfortunately, sure to inspire copycats.

What's ahead: More guns, grenades, and grandiose claims. And more attention from misinformed regulators who fear 3D printers as the ultimate tools of anarchy.

5. Medical miracles

Some of the most promising applications for 3D printing are in health care, where higher costs are acceptable and customization really matters. It's a little-known fact, but one of the world's largest single users of 3D printing lies in the medical realm today: Align Technologies, maker of the Invisalign system for straighter smiles.

What's ahead: We've already witnessed everything from skull and facial implants to low-cost prosthetics to replacement windpipes, but I expect the year ahead will be filled with fresh ideas. While fully functional organs are still a long way off, the ability to start tailoring solutions for individual patients is a big deal, and as practitioners gain more comfort and experience with this powerful toolset, we'll all be better off.



Alliance for Manufacturing & Technology

Benefits of Becoming an AM&T Associate

- Four free hours of consulting services
- Your company's profile will be featured in the "Associates' Corner" of our monthly newsletter, which is distributed throughout eight counties: Broome, Chemung, Chenango, Delaware, Schuyler, Steuben, Tompkins, and Tioga. Also, the newsletter is featured on our website giving your company worldwide exposure
- Discounted fees at AM&T sponsored seminars & workshops
- A free Performance Benchmark and Transformation Planner (\$2,500 value)
- A link to your company's website from ours
- Assistance with Technology Transfer, Funding Sources, Venture Capital Investment, Networking, Research & Development Programs, etc

Call Jim Cunningham at 607-725-1225 to ask about becoming an associate.

More information at www.amt-mep.org

Associates' Corner

Kennedy Valve began operations when Daniel Kennedy started making gate valves in 1877 on Gold Street in Lower Manhattan. After one relocation to Coxsackie, the company moved to Elmira in 1907.



Decades of steady growth included one significant boost during World War II when the Maritime Commission awarded three contracts to the company to manufacture eight million valves for the Victory Fleet.

Now occupying a 52-acre site, Kennedy Valve is today a full-line waterworks valve and hydrant manufacturer, supplying resilient seated gate valves, fire hydrants, check valves, butterfly valves, indicator posts, grooved butterfly valves and an assortment of related products that are distributed worldwide.

In 1988, the company was purchased by McWane, Inc. of Birmingham, AL., and in 2007 celebrated the milestone of 100 years of operations in Elmira. Approximately 400 people are employed at Kennedy Valve and annual sales are in excess of \$125 million.

In addition to providing jobs and products for its customers, Kennedy Valve management emphasizes that the company believes another important role is to be a good corporate neighbor by supporting initiatives that give value to the community. For example, the company has a Community Advisory Panel that enables a cross-section of community representatives to work with company stakeholders on issues that impact their environmental, social and economic interests. In addition to company representatives, panel members typically include local commu-

nity leaders, public officials, educators, union members, regulators, members of the clergy, residents and business leaders.

Over the years, Kennedy Valve team members have helped build playgrounds and houses in partnership with Habitat for Humanity and worked to clean up local neighborhoods. Employees have participated in fundraising walks for charitable and non-profit organizations, and volunteered their time and talents for endeavors supporting the arts, education, resources for children, and senior citizen facilities.

Since 1997, McWane has invested over \$32 million in capital improvement projects at the Elmira facility to make its production processes safer, environmentally sound, and more productive. With assistance from AM&T, in 2011 Kennedy Valve received ISO 9001:2008 certification.

One result of the continuous improvement efforts at the company is that a company product line that had been produced in Thailand was brought back to the US last spring. The products re-shored by Kennedy Valve are Rotating Disc Gate Valves that range in size from 3" to 72", and were originally designed and produced in this region in the early 1900's, but eventually production was moved offshore.

"Our lean manufacturing accomplishments here have enabled us to free up capacity so that we can take on that business without having to purchase new equipment and build new space" said Lisa Rawcliffe, the company's lean manager.

For more information visit www.kennedyvalve.com

AME Event - Improvement Kata / Coaching Kata

After a brief company introduction and tour there will be a hands-on workshop on "Toyota Kata" based on the book by Mike Rother. Attendees will apply what they learn to several processes on the shop floor, working closely with host company members. Rapid experiments will be performed providing real life experience in the Improvement Kata. Attendees will also practice the Coaching Kata throughout the workshop.

The workshop will use a "learn-do" approach. Attendees will apply what they learn to several processes on the shop floor, working closely with host company members.

HOST COMPANY:
Hilliard Corporation

Founded in 1905 to manufacture a machine tool clutch, The Hilliard Corporation has evolved from a small one-product business into a special-applications engineering company serving customers worldwide.

WHO SHOULD ATTEND

- This event has broad application to people in any company, and in any role - operations and support personnel, hourly associates to the CEO
- Anyone who has struggled with developing a culture of continuous

improvement, and making change a daily habit

PARTICIPANT BENEFITS

- Learn how to manage differently and more effectively
- Learn how to practice the Improvement Kata Routine by applying to actual processes
- Learn how to perform Coaching Kata
- Understand how Toyota Kata fits in with other approaches to continuous improvement

June 1-2, 2015

<http://www.ame.org/event/improvement-kata-coaching-kata>

Around the Southern Tier

| | |
|-----------|---|
| Apr 14 | Cyber Security Certificate - Elmira College - 800-354-4720 |
| Apr 15 | Business After Hours - The Corning Area Chamber - 607-936-4686 |
| Apr 15 | Annual Business Expo - The Watkins Glen Area Chamber - 607-535-4300 |
| Apr 16 | Main Street Social Media Series - The Corning Area Chamber - 607-936-4686 |
| Apr 17 | Main Street Social Media Series - The Corning Area Chamber - 607-936-4686 |
| Apr 18 | Spring 2015 Quality Conference - Binghamton Section of ASQ - www.asqbingham.org |
| Apr 21 | Morning Mingle - The Corning Area Chamber - 607-936-4686 |
| Apr 23 | Effective Marketing on the Internet - The Greater Binghamton Chamber - 607-772-8860 |
| Apr 23 | Business After Hours - The Chemung County Chamber - 607-734-5137 |
| Apr 24 | Innovation Day 2015 - SUNY Binghamton - http://tinyurl.com/kmcmxxa |
| Apr 29-30 | 2015 Renewable Energy Conference - Marist College - http://tinyurl.com/op5drz6 |
| May 06 | Small Business Training Part 1 - SBDC at Binghamton University - 607-777-4024 |
| May 13 | Small Business Training Part 2 - SBDC at Binghamton University - 607-777-4024 |
| May 14 | Business After Hours - The Chemung County Chamber - 607-734-5137 |

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Return Service Requested

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HELPING MANUFACTURERS PLAN, PERFORM, PROFIT & GROW

We are a team of experienced, skilled consultants and trainers dedicated to helping manufacturers in the Southern Tier of NY plan, perform, profit & grow. Our goal is to have manufacturers remain, grow and prosper in the Southern Tier.

AM&T uses a comprehensive, overall business approach to create significant and long-lasting business improvements. Our experience is that individual improvement methodologies will provide some measurable benefits on their own, but it is the combination of them across the whole value chain that will lead to dramatic gains.

WE HELP BUSINESS LEADERS:

- Assess their current state
- Articulate and define their desired future state
- Train their workforce in improvement methodologies
- Implement process improvements across the whole value chain
- Identify new opportunities
- Achieve and sustain growth and breakaway results

AM&T DELIVERS:

A third-party survey for 2008-2013 reported impacts of:

- 3,461 jobs created or retained
- \$622 million in increased or retained sales
- \$15.0 million in cost savings
- \$44 million in investments
- \$845 million total impact
- 4.6 out of 5.0 Customer Satisfaction

OUR SKILLS:

- Business Assessments
- Strategic Planning
- Lean Enterprise
- Supervisory Training (TWI)
- Project Management
- ISO/AS Quality Systems
- Sales and Marketing
- New Opportunity Identification and Growth — Markets, Products, Services, Customers

Our integrated, comprehensive approach, applied to the whole value chain, can make a difference. We are "hands-on", roll-up-your-sleeves people and we're passionate about manufacturing.

Call Jim Cunningham at 607-725-1225 to ask how we can help.