



NJMEP

MANUFACTURING MATTERS

SPRING 2020

Helping New Jersey Manufacture Success

www.njmep.org

STATE OF THE STATE OF MANUFACTURING IS **JERSEY STRONG**

ALSO IN THIS ISSUE:

NEW MADE IN NEW JERSEY COMPANIES p12

WHAT IS DMAIC? p19
EXPLORING THE CORE OF SIX SIGMA

WORKFORCE DEVELOPMENT
**CREATING THE NEW JERSEY
MANUFACTURING PIPELINE p26**



YOUR ROADMAP BEGINS WITH AN ASSESSMENT

New Jersey Manufacturing Extension Program, Inc. (NJMEP) is a not-for-profit company that helps New Jersey's small to mid-sized manufacturers become stronger and more competitive. Designed to meet your needs, we develop more effective business leaders, drive product and process innovation, promote company-wide operational excellence and foster creative strategies for business growth and greater profitability. NJMEP's training processes and methodologies are designed to specifically meet the needs of manufacturers.

PLAN

A customized action/training plan and executive summary is developed after the assessment; and presented featuring strategies and solutions designed to improve productivity, quality, profits and sales. Unlike other work plans, this one is focused on specific actionable steps for improvement and drives quantifiable results.

ACT

Once a program is completed, we work with you to update your customized action/training plan and identify the next steps for improvement in your business.



ASSESS

Our no-cost business assessment is the core of NJMEP's business improvement services and the first step in our strategic hands-on approach to help improve your company's performance. The assessment is a comprehensive, on-site, evaluation of your company's operations that both appraises capabilities and gauges the effectiveness of business systems in the following key areas:

- Sales • Production • Supply Chain • Strategy •
- Human Resources • Regulatory/Compliance •
- Quality • Finance •

DO

We have a variety of solutions to help you, and can implement solutions through:

- Customized learning through on-site training
- Problem solving through consulting and process improvement
- General awareness learning through seminars and workshops

CHECK

We measure our success by yours. The results are derived from a NIST survey that is calculated approximately 6-12 months post-project. Each project is analyzed for success based on quantifiable impacts such as: increased sales, jobs created and retained, and cost savings. We don't succeed unless you succeed.

MANUFACTURING MATTERS

SPRING 2020

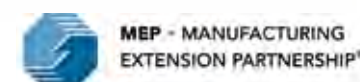
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Connect with NJMEP



Helping U.S. Manufacturing Thrive and Remain Globally Competitive

MEP NATIONAL NETWORK PERFORMANCE IMPROVES

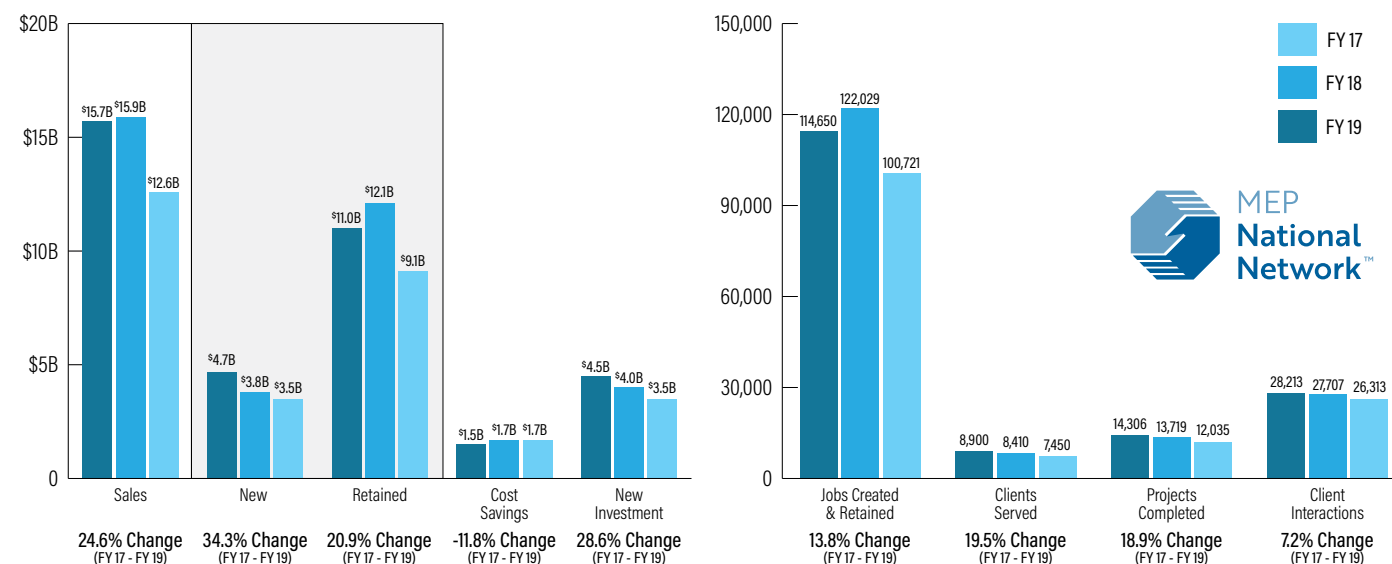
Manufacturing is a cornerstone of the United States economy. The National Institute of Standards and Technology's (NIST) Manufacturing Extension Partnership (MEP) Program's work to ensure US manufacturers receive the highest possible ROI. United States manufacturers can rely on the MEP National Network to help increase and retain sales, achieve cost savings, create and retain jobs, and continuously improve. The proof is in the numbers.

A study conducted by W.E. Upjohn Institute in May of 2019 found that NIST's MEP Programs generate a substantial economic and financial return of 14.4:1 for the \$140 million annually invested by the federal government. Every six months an independent firm survey the manufacturers that came to MEP Programs for assistance and measure the ROI impact. In FY18, MEP clients reported \$16.0 billion new and retained sales and the saw the creation of 122,029 American manufacturing jobs.

Across the nation, manufacturers realize the value of working with the MEP National Network. The Upjohn study found more jobs were generated by the MEP Program than directly reported by its clients. The study notes that 238,000 additional jobs exist in the U.S. because of MEP Center projects in 2017 than would have existed without MEP Programs.

MEP Programs like NJMEP are dedicated to providing manufacturers the highest possible return on their investment. The MEP National Network has a straightforward mission: Strengthen manufacturer's competitiveness by enhancing productivity, performance, and profitability. As a trusted advisor to New Jersey manufacturers, we leverage our staff and resources to help identify areas of improvement and streamline processes. It is up to every MEP Program to bring this mission to their state. NJMEP will continue doing its part to ensure New Jersey manufacturers remain globally competitive and business continues to thrive in the Garden State. 🍷

MEP National Network Performance FY 17 - FY 19



MANUFACTURING MONTHLY THEMES KEEP PACE WITH A TRANSFORMING INDUSTRY

Manufacturing is comprised of an array of concentrations. Engineering, research and development, business development, sales and marketing, logistics and transportation, the list goes on. The manufacturing industry is unique. There is a never-ending list of certifications to consider, regulations to navigate, and cost savings opportunities to explore. To ensure New Jersey manufacturers and business leaders can keep up with all these complexities, NJMEP is hosting a new manufacturing theme every month!

The first quarter of the year showcased ISO, National Inventors day, and Energy & Sustainability.

Manufacturing Monthly Themes

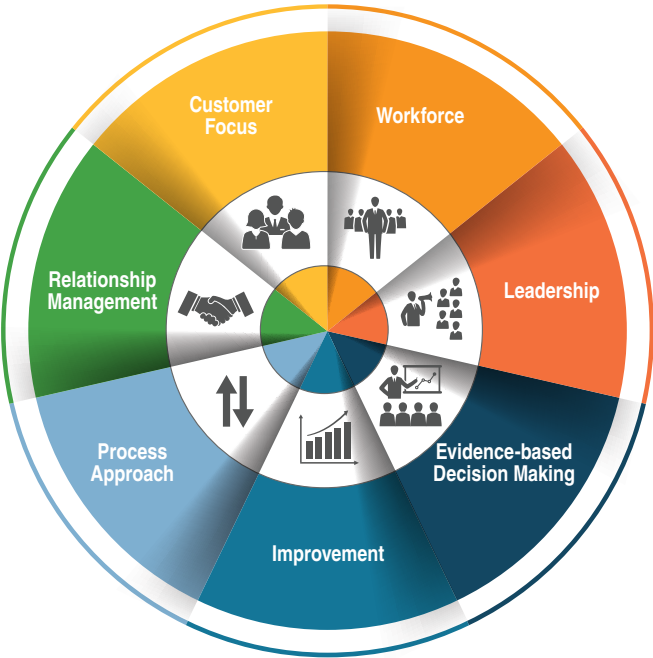
Each month NJMEP will be focusing on a specific topic and manufacturing-related theme. Manufacturing is a complex ecosystem and touches so many industries and sectors. The Monthly Manufacturing Themes will be just as broad and exciting as the industry itself, so don't miss out! Be sure to check back in every edition of Manufacturing Matters or follow the Manufacturing Monthly Themes on NJMEP.org.



January — ISO Certifications

ISO 9001 is the international standard that outlines detailed requirements for a quality management system (QMS). When it comes to manufacturing, there are few aspects that are more important than quality. High-quality products improves customer satisfaction, a business's reputation, and increases trust between customers and a manufacturer.

ISO was selected to be an NJMEP Manufacturing Monthly Theme because of the value it can provide any organization. Manufacturers searching for ways to improve their overall organization can turn to the applicable ISO certification. Becoming ISO certified can even allow manufacturing companies to bid on previously unobtainable contracts. With all the benefits that come along with ISO certification, it deserved to be the theme that started off the new year.



February — National Inventors Day

President Ronald Reagan officially named February 11th National Inventors Day. The day was chosen to honor one of the greatest inventors in U.S. history, Tomas Edison. Edison was born on February 11 in 1847 in Milan, Ohio. Since then, Edison has inspired thousands upon thousands of inventors across the nation and around the world to pursue innovative solutions.



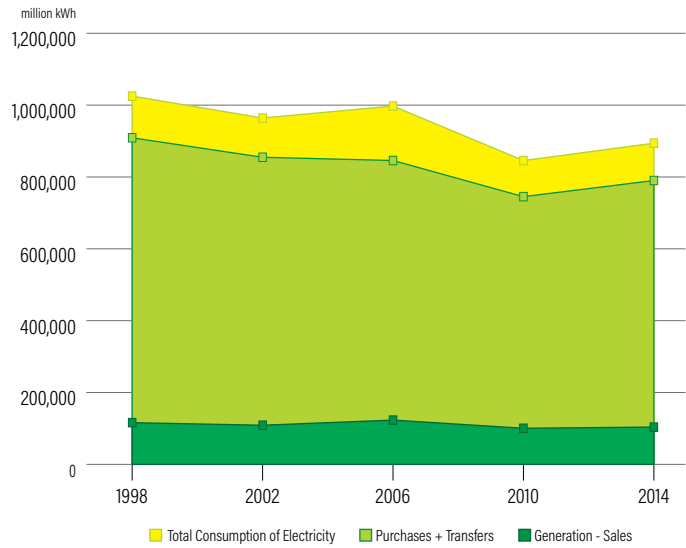
National Inventors Day takes place on the 11th but inventors celebrated all month long. Not only is this a time to remember the incredible individuals that help change the world as we know it, but it's also a time to inspire. In today's business landscape Science, Technology, Engineering, and Mathematics (STEM) education is being promoted with vigor. Manufacturing relies on new talent with a background in STEM. The more attention the greatest inventors receive, the more students might want to emulate these progressive and forward-thinking individuals. Anyone that wants to catch up on the conversation from February can look back using #NationalInventorsDay on social media.

March — Energy & Sustainability

Manufacturing is a notoriously energy-hungry industry. The "Manufacturing Energy Consumption Survey chart" shows just how much energy it takes to keep this critical industry moving forward.

High energy costs are often seen as an unavoidable burden on business. However, there are ways manufacturers can lighten the load. Businesses that employ strategic green initiatives and look toward new, revolutionary technology will

CONSUMPTION OF ELECTRICITY HAS GENERALLY DECLINED SINCE 1998 YET THE PROPORTIONS OF RECEIPTS AND GENERATION LESS SALES HAVE REMAINED CONSTANT



Source: EIA, Manufacturing Energy Consumption Survey, selected years.

be able to realize a substantial return on their investments. Sustainable and energy-efficient technologies, equipment, and lighting will help drive those energy costs down. There are even some unique strategies like green roofs or partnering with energy providers and businesses nearby that can prove to be valuable strategies. March is about exploring the wide range of energy and sustainability solutions for manufacturers. Every dollar saved on an energy bill is a dollar added to the bottom line.

STATE-OF-THE-STATE MANUFACTURING



State-of-the-State of Manufacturing as COVID-19 Took Hold

Manufacturers from all over New Jersey come together each year to show support for the industry. The State-of-the-State of Manufacturing is hosted by NJMEP and it connects NJ elected officials with business leaders. This year the event had to be canceled due to the COVID-19 pandemic.

NJMEP is still able to keep New Jersey legislators informed about the needs of the manufacturers in the state. Instead of hosting our in-person event, decision-makers will be briefed on current industry developments and manufacturers' pain points. The new 'Made in New Jersey' logo was going to be shared at State-of-the-State 2020. Now, NJMEP is using this logo as a symbol of hope. Manufacturers from all around the state are proudly displaying the new 'Made in New Jersey' logo which highlights their value as they have been deemed essential in times of crisis.

New Jersey is staying strong through the COVID-19 pandemic. Manufacturing is playing a vital role in helping the country triumph over this disruption and will prove essential in the recovery. NJMEP will remain open and provide critical support to our state's manufacturers and will continue to be a conduit between the public and private sectors. Events like State-of-the-State of manufacturing help the government understand the true economic impact of manufacturing. In place of the State-of-the-State of Manufacturing, NJMEP will be working twice as hard to keep lines of communication open to ensure the industry progresses forward. 🌈

MANUFACTURERS CELEBRATE NEW BILL MANUFACTURERS SECURE WORKFORCE DEVELOPMENT TRAINING GRANT PRIORITY

New Jersey manufacturing has a growing list of legislators advocating for the industry. This is becoming even more evident by Governor Murphy's recent signing of Assemblyman Hal Wirths bill. The bill gives manufacturers preference when applying for workforce development grants.

"This law will help support the more than 250,000 people currently employed in New Jersey's manufacturing industry by providing them with the skills they need to advance in their careers," said Wirths. "Manufacturers will have a greater ability to invest in their employees, retain their talent, create jobs, and grow the economy."

Manufacturing around the nation is currently facing a skills gap. It has become difficult to find people with all the experience and skills manufacturers need. However, manufacturers can instead cultivate their talent pipeline by providing training opportunities to employees. According to the NJMEP 2019 Industry Report, the average annual salary of a manufacturing worker is over \$90,000. The opportunities are incredible in the industry but the public perception of manufacturing

over the past couple decades has convinced people it is no longer a viable career choice. This couldn't be farther from the truth.

"Employers are in need of qualified workers to fill manufacturing jobs that pay a good living. These grants help meet workforce demands and provide gainful employment," said Wirths.

The bill introduced by Assemblyman Hal Wirths is aimed at providing support to manufacturers willing to train individuals and helps provide the workforce the

skills they need to contribute to these manufacturing operations. Furthermore, the skills employees develop through manufacturing training programs will set them on a path to an amazing career in a thriving industry here in New Jersey.

"Helping New Jersey employers properly train their workforce will help create, upgrade, and retain jobs to which our residents wouldn't otherwise have access," said Assemblyman Houghtaling (D-Monmouth).

"By adding manufacturing employers, we're opening up a whole new field with a variety of positions that will empower people to become more self-sufficient and employable."

Understanding what manufacturers need in New Jersey is essential in delivering critical business-positive legislation that continues to promote manufacturing in the state. The Manufacturing Caucus, with help from NJMEP, have expanded their meetings to South Jersey to make sure the needs of all manufacturers throughout the state are heard.

NJBIA Vice President for Government Affairs Mike Wallace said in the official statement announcing the new training grant priority, "As we saw at the Manufacturing Caucus hearing in South Jersey earlier this fall, finding skilled workers is a huge challenge for manufacturers in this job market," He continued by explaining, "If we want

to make New Jersey a place where manufacturers can succeed, we must provide a way for them to find the skilled workers they need."

Workforce training grants provide manufacturers the opportunity to cultivate talent. Instead of relying on high schools to train students, or hoping a CNC operator with 20+ years of experience happens to answer a job ad, manufacturers can proactively bridge their own skills gaps. 🌈

SPECIAL THANK YOU TO THE MEMBERS OF THE NEW JERSEY MANUFACTURING CAUCUS

Senator Linda Greenstein
Senator Oroho
Senator Thompson
Senator Troy Singleton

SPECIAL THANK YOU TO ALL THE NEW JERSEY LEGISLATORS THAT SPONSORED THE BILLS.

Senator Dawn Marie Addiego as Primary Sponsor
Senator Fred H. Madden, Jr. as Primary Sponsor
Assemblyman Wayne P DeAngelo as Primary Sponsor
Assemblyman Eric Houghtaling as Primary Sponsor
Assemblyman Harold J. Wirths as Primary Sponsor
Senator Steve V. Oroho as Co-Sponsor
Senator Anthony M. Bucco as Co-Sponsor (during time in Assembly)
Assemblywoman Carol A. Murphy as Co-Sponsor
Assemblyman Parker Space as Co-Sponsor
Assemblyman Thomas P. Giblin as Co-Sponsor
Assemblywoman Valerie Vainieri Huttie as Co-Sponsor



Every quarter NJMEP will be highlighting new members of the Made in New Jersey program. These New Jersey manufacturers signed up to take part in this complimentary listing to show the New Jersey that their business is producing right here in the Garden State.

There are a variety of perks to becoming a Made in New Jersey member. They range from no cost promotion to official Made in New Jersey logos they can use on their products and website. Additionally, becoming a Made in New Jersey member shows NJ elected officials that the state is home to thousands of small, medium, and large manufacturing organizations. By highlighting the vast amount of manufacturing being done in the state, legislators are encouraged to create and pass more pro-business legislation.

MADE IN NEW JERSEY BENEFITS:

ALL NEW MINJ MEMBERS ARE LISTED IN MANUFACTURING MATTERS MAGAZINE

Manufacturing Matters is distributed to over 14,000 business leaders throughout New Jersey.

HAVE A CHANCE TO BE SELECTED AS "MANUFACTURER OF THE WEEK"

One MINJ member is highlighted and shared via all of NJMEP social media networks each week.

A PROFILE PAGE ON NJMEP'S WEBSITE SHOWCASING YOUR COMPANY

Improve your company's brand awareness and search engine ranking.

DISPLAY THE MADE IN NEW JERSEY LOGO ON YOUR WEBSITE

Show businesses and customers visiting your website that you manufacture products here in NJ.


RECEIVE AN OFFICIAL MADE IN NEW JERSEY PLAQUE TO DISPLAY ON SITE

Showcase your New Jersey pride by displaying an official MINJ plaque at your manufacturing facility.

HOW TO BECOME A

MADE IN NEW JERSEY MEMBER

Becoming a Made in New Jersey manufacturer is easy. Manufacturers that have a facility in New Jersey can visit njme.org/made-in-new-jersey or call 973-998-9801 to enroll today.

There is no cost to becoming a Made in New Jersey company. This program was developed to provide value to New Jersey manufacturers. 

Welcoming the Latest Made in New Jersey Manufacturers

These Businesses Drive the NJ Economy Forward



APM HEXSEAL was founded in 1947 with a mission to develop and manufacture environmental sealing solutions to protect and prolong the life of electromechanical switches and circuit breakers. With over 100 patents to its name, and parts installed by more than 200,000 customers, APM Hexseal has remained the prime supplier for the boating industry, beverage dispensing machinery, combat equipment of all kinds, off-road vehicles, medical equipment, a broad range of instrumentation and communications equipment, and many others.



CRYSTAL PHARMATECH is a technology-driven contract research organization (CRO) that focuses on materials science and engineering for drug development. We partner with clients to ensure comprehensive solutions for their needs in solid-state research, crystallization process development, and preformulation studies. We guide clients in the discovery and selection of the optimal solid phase for drug development using all aspects of pre-formulation studies, including API process and formulation development, regulatory support and intellectual property protection. Founded in 2010, Crystal Pharmatech has business relationships with over 150 global pharmaceutical companies. High quality service, a culture of confidentiality, and fast turnaround with cost-effective pricing are our trademarks. As we continue to grow, Crystal Pharmatech will always keep customers our number one priority. We will also continue to be at the forefront of innovation in the field of solid-state chemistry so that our customers can reap the benefits of key discoveries in an ever changing field. Our Scientific Advisory Board includes global leaders in drug development covering amorphous dispersion, co-crystals, crystallization, solid forms, formulation and pre-formulation. The role of our board is all encompassing while we search for new scientific areas for internal and external projects.



ENERGY BEAMS, INC. manufactures high vacuum equipment and components for thin film deposition, photovoltaic, cryogenics, spectroscopy, semiconductor, particle physics, the aerospace industry and many more. We are family owned and operated since 1966 and take great pride in all aspects of manufacturing, engineering and fabrication. Products include chambers, feedthrus, targets, valves, manifolds, high purity gas assemblies and much more.



The **EPIC MILLWORK** team has over 30 years experience in specialized carpentry trades work. We specialize in manufacturing and installing custom cabinetry, trim, countertops and more in a wide variety of facilities.



ISOLATEK INTERNATIONAL is the World Leader in Advancing Passive Fire Protection Technology® for the steel construction industry and petrochemical facilities. Isolatek is the leading single source manufacturer of Commercial, Medium & High Density Spray-Applied Fire Resistive Materials (SFRMs), Intumescent Fire Resistive Materials (IFRMs), Rigid Board & Spray-Applied Acoustical / Thermal products. Its comprehensive line of fireproofing materials offers exceptional thermal performance, superior durability, and ease of application, and are manufactured and tested to satisfy major model building code requirements, including International Building Code (IBC)



For more than 50 years, **MAC** has designed and built a wide variety of high-quality products for the electric utility, electrified transit, construction, and OEM industries. With a unique blend of modern manufacturing facilities, highly experienced and skilled engineers, technicians, and craftsmen, MAC produces high-quality products that meet the needs of the most demanding industries. All facets of our operations are certified ISO9001-2015.



Custom manufacturer & distributor of gaskets, hoses, fittings, and expansion joints for industrial applications, **MERCER GASKET & SHIM** can provide you with the right material for your specific industrial application. We are ISO 9001:2008 certified, so you can trust the quality and commitment behind our products. In addition, we excel at speed, flexibility, and convenience when getting critical industrial supplies to our customers with 24 hour service 365 days of the year.



MODERN MATÉRIEL is a small firearms manufacturer that specializes in the NJ compliance market and in law enforcement sales.



NATURALVERT is a food manufacturing company. As the name suggests, we produce organic and gluten-free products that are delicious and nutritious. We currently have a high quality granola that serves in many food application such as cereal, snacks and expanding into many other product lines. Our goal is to offer a healthy and tasty alternative that satisfies the ever-growing need for organic and gluten-free products in the food industry.



PHILLIPS PRECISION MEDICRAFT is a leading manufacturer of advanced orthopedic implants, instrumentation, sterilization delivery systems, cases and trays. PPM was founded 50 years ago on its ability to create industry-changing innovations and unique solutions that allow its OEM customers to achieve their most complex goals. By maintaining a culture of continuous improvement, LEAN manufacturing disciplines and integrating continuous improvement efforts with value stream partnerships, PPM can adapt its business to fit their customer's needs, precisely. This, along with our unwavering pursuit of excellence with American-made values, defines who we are today: partner of choice for the world's largest OEMs.



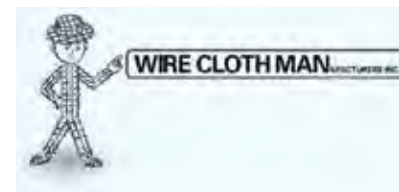
PURATOS is an international group offering a full range of innovative products, raw materials and application expertise to the bakery, patisserie and chocolate sectors. Our headquarters are just outside Brussels (Belgium), where the company was founded in 1919. Almost a century later, our products and services are available in over 100 countries around the world and, in many cases, are produced by our network of local subsidiaries. Above all, we aim to be 'reliable partners in innovation', helping our customers around the world to deliver nutritious and tasty food to their local communities.



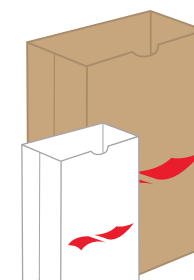
Family owned and operated since 1956 **RANDALL MANUFACTURING CO., INC** has been the premier Made in the USA manufacturer of wood and aluminum moldings, door sweeps/stops, aluminum structurals, aluminum sheets, thresholds, piano hinge, sliding door and bi-fold track, rolled weatherstrip, closet poles and more! We strive to produce (and our customer agree that we do) the highest quality items in our product categories. By using higher quality materials and superior manufacturing techniques that lead to a higher quality product, while keeping the manufacturing in the USA, we maintain a higher grade of product than our competition. We sell to door shops, flooring stores, hardware stores, and lumber yards in New Jersey and across the country.



SISKA is a company specialized in eyelets, grommets, rivets manufacturing, setting dies and machines with more than 60 years of experience serving the garment, millinery, electronics, printing and graphics, medical, and automotive industries. We have over 250 Million eyelets, grommets, and rivets in stock. Our highly trained staff has always been dedicated to making sure you have the right fastener and machine. Our superior quality products and services, competitive pricing make us the leader in the fastener industry. We are confident you will find Siska to be a great partner for your business.



WIRE CLOTH MANUFACTURERS, INC. was established in 1965. Our reputation as leader in the industrial wire cloth industry had led us to expand our horizon into the retail and commercial product line. Our product line includes galvanized welded wire, PVC coated welded wire, hardware cloth, hex netting, PVC coated hex netting, and a wide range of lawn and garden products. We require all suppliers to meet the terms of our purchase order as well as; conform to all levels of quality that we deem necessary to produce a quality product. WIRE CLOTH MANUFACTURERS, Inc. carries a large inventory of products and can ship an order within 24 hours. Our experienced sales staff will provide service and technical information whenever possible. Call WIRE CLOTH MAN today for all your industrial, commercial, and retail wire requirements or shop for wire cloth products online and we'll ship them anywhere in the United States.



Your Source for
"Out of the Bag Innovation."



Broadway Industries would like to thank the NJMEP

**We are honored to receive the
Manufacturer of the Year - Manufacturing Cares Award**

broadwayindustries.com | 800.342.5113 | Monroe Twp., NJ • 08831



Puratos
Reliable partners in innovation

**FACILITY
TOUR AND
CELEBRATION**

On Tuesday, December 3, 2019, the New Jersey business community and representatives from local and state government came out in support of a local New Jersey manufacturer, Puratos USA. This food manufacturer is celebrating two massively impressive achievements. The first is the addition of a brand-new production line. Second, NJMEP presented Puratos with the “Made in New Jersey” award which commemorates the company’s incredible contributions to the New Jersey economy and their local community.

NJMEP worked together with Puratos Corp. to create a celebration worthy of these accomplishments. The day consisted of a meet and greet with Puratos Corp. CEO, Daniel Malcorps; Paul Bakus, Puratos President – North America; and its Board Members. A ribbon-cutting ceremony took place in front of the new Puratos production line and all those in attendance were given a tour of the production facility.

Media coverage was handled by ROI-

NJ and NJBIZ. Representatives from NJEDA, NJBIA, and NJBAC came out in support of Puratos. Alison DeJoseph, Project Manager from nearby Rowan College of Burlington County (RCBC) brought the higher education presence to the group of individuals invited to the celebration. Pennsauken Mayor, Betsy McBride and multiple representatives from the township of Pennsauken attended to congratulate



this manufacturer that has given so much back to their local community. President & CEO of the Chamber of Commerce South Jersey, Christina M. Renna joined the group. Finally, Senator Linda Greenstein, Chair of the Legislative Manufacturing Caucus as well as Senator Thompson, Member of the Legislative Manufacturing Caucus had the opportunity to step inside one of the manufacturers that helps New Jersey thrive as an economic powerhouse.

Welcome to the Puratos USA New Jersey Facility

Nihal Raval, Puratos USA Site Director explained the safety requirements and shared an overview of what everyone would be seeing throughout the tour. Next, Puratos CEO, Daniel Malcorps shared his passion for Puratos products and the company’s mission with the influencers in the room. Malcorps described why the Pennsauken site is particularly important to the multi-national Puratos Corp and explained

that a goal of Puratos’s was to keep the company family-owned well into 2020 and beyond.

Puratos wants to be better so its employees continue to feel a sense of pride while working for the New Jersey manufacturer. They want to have a positive social impact, going above their already powerful social contributions like helping Ivory Coast chocolate farmers double their income. Becoming CO2 and water balanced by 2030 is also a primary goal of the company. Constantly pushing the boundaries of what’s possible in the food manufacturing space is what Puratos does best. Working with NASA and the European Space Agency, Puratos is helping to research and develop food that will be eaten or grown on the Mission to Mars. This innovative thinking and push to research low energy food / sustainable food production will not only benefit astronauts traveling through space but can be implemented here on Earth to create more environmentally friendly processes.

Lastly, the day finished up with a tour of Puratos’ production facility. The facility produces a wide assortment of different pastry ingredients. The tour showcased the production and processing of the raw ingredients, quality control, and the command center that oversees the entire operation.

NJMEP and all those that attended were thrilled to have had the opportunity to honor this business. The ribbon-cutting ceremony marked the official opening of the brand-new production line. Following the ribbon-cutting, NJMEP was able to present the exceptional manufacturer with the ‘Made in New Jersey’ award. The entire day was filled with optimism and New Jersey pride. Puratos was ecstatic to share their success with all those that visited the facility. New Jersey has a substantial manufacturing presence and it’s critical these businesses’ contributions and successes are showcased.

Want to become a Made in New Jersey member? Want to learn more about the benefits of the program? Contact Michael Womack, Marketing Outreach Coordinator at mwomack@njmep.org to get started today. 🍌

**CUSTOM
PICTURE FRAMES.com**

Congratulations Custom Picture Frames on being the latest manufacturer added to ‘Made in New Jersey’! Creativity and craftsmanship drove Anthony Fontana to build a thriving business. Located in Central New Jersey, Custom Picture Frames manufacture affordable custom picture frames.

Anthony Fontana’s innovative approach to the process allows more people to display their pictures, art, and keepsakes in the beautiful frames they deserve. It began as a passion project, serving only friends and family. Quickly his reputation for producing high-quality work began to spread. Soon, people were coming from all over the state to inquire about a custom frame. Anthony had to create an online shop. Demand for his products began to outgrow his home workshop.

CustomPictureFrames.com is now a thriving, full-scale manufacturing operation. The company is doing its part to keep the local market flourishing. No matter how large they grow, the company is dedicated to providing beautiful custom framing options at an affordable price.

NJMEP would like to congratulate Anthony Fontana and the entire Custom Picture Frames team on becoming a Made in New Jersey member.

Jersey V Guys

5th Annual Golf Outing

We are always excited to give back to our community, and it should come as no surprise that the Jersey Guys Golf Outing is one of our favorite ways to do it. Combining our love for fresh air and fairway with lasting community outreach, this year's upcoming Jersey Guys V!!! looks to top the success of all prior years.

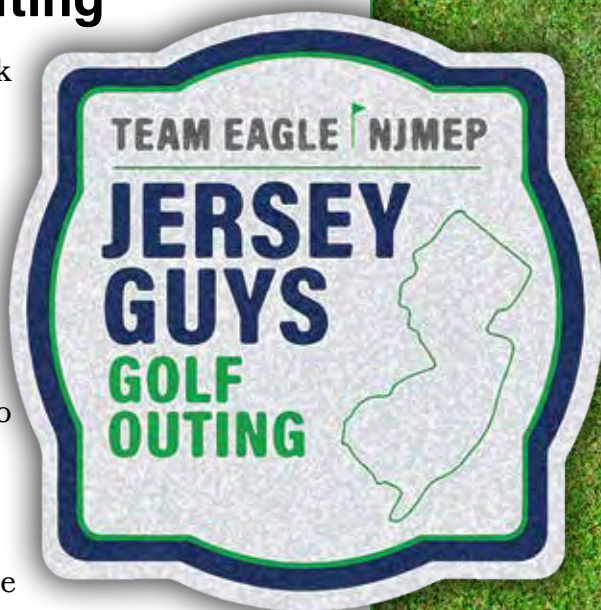
Partnering with the Team Eagle Foundation, NJMEP hopes to raise more money through updated rewards and prizes! Participants will enjoy knowing that all proceeds from the Jersey Guys Golf Outing will go to scholarships for the young adults of New Jersey.

Friday, July 24, 2020

Minebrook Golf Club
500 Schooley's Mountain Road
Hackettstown, NJ 07840



For Event Information and
Sponsorship Inquiries Contact
Peter Okun - pokun@njmep.org



Six Sigma is a methodology that is comprised of multiple strategies that help businesses develop innovative solutions to address bottlenecks and inefficiencies. DMAIC is one strategy within the overarching Six Sigma methodology. DMAIC is an acronym that outlines how a company can improve a specific process. It stands for Define, Measure, Analyze, Improve, and Control.

Six Sigma is considered a well defined problem solving methodology which focuses on customer requirements through the use of fact based, data driven, and statistical tools. The philosophy of Six Sigma recognizes that there is a direct correlation between the number of product defects, wasted operating costs, and the level of customer satisfaction.

DMAIC is critical to improving speed, quality, and cost. Each step within the DMAIC strategy helps logically define problems, implement solutions, establish best practices, and ensure these solutions remain in place.

TO IMPROVE, ONE MUST UNDERSTAND WHERE INEFFICIENCIES LIE.

Using the DMAIC strategy to improve a process begins with selecting a project to employ this strategy. Next, DMAIC moves on to reviewing implementation options for process improvements. Lastly, businesses will work through each step of the DMAIC strategy to ultimately improve a specific business process.



The formal definition of Six Sigma is a statistical measure of quality, 2.4 defects per million or 99.99966% good quality. Although zero defects is the goal, as a measure Six Sigma will drive an organization toward achieving high levels of customer satisfaction while reducing operation costs.

SELECTING DMAIC PROJECTS

The first step to improving a process is determining which processes are most worth improving. Determine what's most important to the business or which value driver is overtly lacking. Cost, profit, revenue, customer segments, these areas along with gathering data from customer/marketing information, process data, employee experiences, and taking into consideration regulatory changes are all critical in determining project selection.

Project selection will begin by screening ideas based on a few critical bits of data or predetermined criteria. These ideas are then passed off to an individual who will perform a deeper dive into the data to provide more details about the

potential ROI, costs, benefits, and scope of work in the form of a project charter draft. The report generated from this more thorough investigation is then compared to a more detailed set of criteria to identify the projects that would have the most worthwhile impact from a DMAIC project.

Understanding which aspects of business would be worth most to the business and its customers is critical. Determining which aspect of a business to improve with a DMAIC project requires a strategic decision to be made.

IMPLEMENTING DMAIC

There are two ways to approach implying DMAIC. Project-team approach or Kaizen approach.

PROJECT-TEAM APPROACH

Black Belts will be deployed full-time to projects. Team members will work on the project part-time and individuals will work on the project alongside their regular work. Full involvement by all team members in all phases of DMAIC will take place. The estimate for the project duration can be 1 - 4 months depending on the scope of a project.

KAIZEN APPROACH

This is a much more intense approach to the DMAIC process. It takes a rapid 1 week or less progress through all of DMAIC except the last step which is full-scale implementation. Preparation on the Define and Measure aspect will be done by a team leader and a Black Belt or another qualified subgroup. The rest of the work is handled by a complete group over several days or a week. This group will work only on this project and nothing else. All participants are pulled away from their regular jobs to focus only on the DMAIC project at hand.

DEEPER DIVE INTO THE FIVE PHASES OF DMAIC



It is critical to have a team reach an agreement on the scope, goals, financials, and performance target for the project. Without documenting the critical components included in the Define phase, the rest of DMAIC will suffer and is prone to failure.

The first draft of the project charter must be made available to the team working on the Define section of DMAIC. Resource allocation must be defined. The size of the team and the initial budget is required to properly and efficiently progress through DMAIC.

STEPS TO DEFINE

1. **Reviewing the project charter:** The team should have a complete understanding of the draft charter. Questions should be written down, submitted by leadership, and answers provided to the team. Any edits to the project charter in terms of scope, timing, the budget should be made immediately.
2. **Validate problem statement, solidify goals, and financial benefits:** The problem presented to the team should; exist, be important to customers, be important to the business, possible to improve using the DMAIC method. The financial benefit should be made apparent through realistic projections and data.
3. **Validate process map and scope:** document the main steps of the original process, see if data exists to provide a baseline to measure improvements.
4. **Create a communication plan:** Clearly document project participants and stakeholders. A plan/process should be determined for keeping all those that need to be informed about the project's progression, up to date.
5. **Develop a schedule, budget, and set milestones.**
6. **Complete the Define gate review.**

DEFINE STAGE DELIVERABLES ARE

- Completed project charter
- Documentation showing how customers and which ones will be impacted by this project and clearly defining their needs
- High-level process map(s)
- Complete project plans. Gantt charts; stakeholder analysis; resistance analysis; risk analysis; action logs; responsibility assignments, and communication plans are all highly recommended.
- Outcomes from the project launch meeting and clearly defined project purpose, charter, deliverables, and team responsibilities.

MEASURE

This next step is to clearly understand the current state of the process and collect reliable data on process speed, quality, and costs. Having access to this data will allow a business to identify underlying issues while giving them a benchmark to measure any kind of improvements from the DMAIC project.

STEPS TO MEASURE

1. **Create a value stream map to confirm the current process flow:** Use a basic process map or deployment flowchart to start. Adding process data will generate a value stream map.
2. **Identify the outputs, inputs, and process variables that impact the specific project:** Data collection is key. Choosing only relevant data for a specific project is critical for benchmarking.
3. **Create a data analysis plan:** Before capturing a large amount of data, it's ideal to have a plan in place and verify what tools can be used to analyze the data that will be collected. This data analytics plan can be modified as new data presents itself.
4. **Keep data and measurements standardized, accurate and consistent:** Data must be accurate to have any value. Measurement tools need to be calibrated and Definitions of all metrics must be used by everyone or every tool collecting data.
5. **Collect data to establish a baseline:** Create a foundation of data so improvements can be accurately measured and documented against this baseline.
6. **Value stream map update:** Update the value stream map with all incoming data
7. **Make "quick-hit" improvements:** If data and risk analysis shows that partial benefits can be made, and there is a process to track these process modifications, make the quick improvements and continue with the project. Document these "quick-hit" improvements and ideas that arise but continue with the DMAIC project.
8. **Prepare for Measure gate review**

MEASURE STAGE DELIVERABLES:

- Fully developed current-state value stream map
- Reliable data on critical inputs (X's) and critical outputs (Y's). Data should be able to analyze defects, variation, process flow, and speed.
- Baseline measurements of lead time, process capability, etc.
- Revisit and redetermine improvement goals
- A capable measurement system should be developed
- Revise the project charter if data reveals previously unidentified information



ANALYZE

Identifying the variables that impact the input and output data that are specifically tied to project goals. This stage will unearth critical insights into where, how, and why a process is not as efficient or productive as it can be.

STEPS TO ANALYZE

1. **Conduct value analysis:** Clearly define value-add, non-value-add, and business non-value add steps in a process.
2. **Calculate Process Cycle Efficiency (PCE):** Compare data to world-class benchmarks to see how much improvement is needed but keep goals within reason and achievable.
3. **Analyze the flow:** Watch and record bottlenecks, constraints in the process, rework points, and assess their impact on throughput and the processes' ability to meet customer demands.
4. **Explain inefficiencies:** Use brainstorming, C&E diagrams, FMEA, and any tools at a team's disposal to list potential causes of any process inefficiencies and bottlenecks.
5. **Narrow the search:** Find the root causes and significant cause-and-effect relationships after identifying all potential inefficiencies.
6. **Prepare for Analyze gate review**

ANALYZE STAGE DELIVERABLES:

- Documentation of potential causes of inefficiencies, quality issues, etc.
- Data charts and analyses clearly showing the link between targeted input and process (X's) and critical output (Y)
- Identification of value-add and non-value-add work
- Process cycle efficiency calculation

IMPROVE

This is the time to execute a full-scale implementation of the improvement strategy.

STEPS TO IMPROVE

1. **List potential solutions:** Begin by taking the confirmed cause-and-effect relationship from Analyze and start listing potential solutions. This is the time to get creative with potential solutions.
2. **Evaluate, select, and optimize:** Take the best solutions and flesh out the ideas. Develop criteria to track potential improvements, document results. Be willing to alter and update these solutions to ultimately develop the optimal solution. **Develop the "To Be" value stream map:** Revise the existing value stream map to reflect what the process will become after the newly implemented changes. Include projections on cost and time savings, quality improvements, etc.
3. **Develop and begin pilot solution:** List and assign tasks to be performed during the pilot solution test phase. Train the team members that will be participating. Document the results of the pilot along with new ideas for improvements as they arise.
4. **Check project goals:** Compare the results of the pilot to baseline.
5. **Develop and execute a full-scale implementation plan**
6. **Prepare for Improve gate review**

IMPROVE STAGE DELIVERABLES:

- For a quality-improvement project: Develop tested, robust solutions shown to affect the proven causes (X's) that affect the critical output (Y)
- For a Lean project: Document results of the chosen Lean best practice or solution applied to the project
- Developing an improved process that is stable, predictable and meets all company requirements



CONTROL

The last step in the DMAIC process is to complete all project work and pass on the improved process to the individual or team responsible for the newly improved process. The new process owner should be given the procedures for maintaining the gains made.

STEPS TO CONTROL...

1. **Develop documentation to continue support:** To sustain full-scale implementation, ensure documentation and support materials that clearly define and outline the process and procedures.
2. **Implement updated process**
3. **Lock in the process:** Create measures that prevent people from reverting to the old process.
4. **Monitor implementation:** Watch, interact, and collect data to make additional improvements as needed.
5. **Develop Process Control Plans and hand off control to process owner:** Pass the process responsibility back to the process owner if control changed hands during DMAIC.
6. **Audit Results:** Measure improvements using proven data points.
7. **Finalize Project:** Document ideas about how this project process improvements can be applied to the company as a whole. Hold the Control gate review. Communicate and share the documentation of project methods and results with others in the organization. Celebrate a completed project!
8. **Validate performance and financial results:** After the project has been improved for several months, review the results and ensure improvements are in-line with expectations.

CONTROL STAGE DELIVERABLES

- Documented plan to transition improved process back to process owner, participants, and the individual in charge of implementing the DMAIC process
- Comparative data and metrics to show and prove the improved process is a step forward from the old process
- Operational training, feedback, and control documents
- A clear and concise system for monitoring the implemented solution
- Specific metrics that will be used for consistent process auditing
- Completed project documentation, lessons learned, and recommendations for additional opportunities down the road.

IMPROVING PROCESSES WITH DMAIC

DMAIC is only part of the Six Sigma methodology. Six Sigma is a broad, proven, and efficient way to drive actionable positive results and make long-lasting improvements to any business. DMAIC is a critical aspect of Six Sigma and the steps above are valuable as reference materials but to truly take advantage of all the benefits that come along with the Six Sigma methodology, consulting with a professional or beginning the journey to becoming a Six Sigma Black Belt is highly recommended.

The DMAIC process is made up of many moving parts. It is highly recommended that no steps are skipped, even if a solution may seem obvious. Each phase within the DMAIC process is critical in addressing a process improvement. However, following each step along the way will ultimately help any company identify, analyze, and improve a process while setting up a foundation that will encourage continuous improvements as time goes on. 🧩



EXPERIENCES



KNOWLEDGE



GOAL



SKILLS



MENTOR

WORKFORCE DEVELOPMENT

NJMEP's Comprehensive Solution to New Jersey's Manufacturing & Logistics Skills Gap



PRO ACTION
NETWORK™

NJMEP



Creating the New Jersey Manufacturing Talent Pipeline

Manufacturers all around the country are facing similar challenges. Finding qualified workers is a top concern. New Jersey businesses can now take advantage of a new career pathway. It provides businesses with access to a growing talent pool. The Pro-Action Education Network™ is a state-wide scalable workforce development strategy. This program combines pre-apprenticeships, pre-screen testing, upskilling opportunities, and apprenticeships.

Manufacturing as a career path is a competitive and technologically advanced industry. Modern manufacturing is much different than the turn of the century industrial environment. Many facilities are clean, high-tech, and nearly all pay competitive salaries.

\$92,094 was the average annual manufacturing industry salary, according to the 2020 NJMEP Manufacturing Industry Report. The Deloitte and The Manufacturing Institute skills gap study shows job openings in manufacturing are growing at double-digit rates since mid-2017. Now is the ideal time to enter the manufacturing field. But, misconceptions are still holding the industry back. Manufacturing struggles to secure an influx of motivated people that have the fundamental skills they need to contribute to a manufacturing operation

THE MANUFACTURING SKILLS GAP - WHERE ARE THE PEOPLE?

Job seekers are everywhere. There is no shortage of people looking for work. Yes, unemployment is low. This compounds the challenge of sourcing new manufacturing workers however, the fact remains that there are still people looking for work.

Manufacturers are facing a challenge in the form of the Skills Gap. Foundational skills like measurement are becoming impossible to find. Shop classes in high schools have disappeared. Opportunities to obtain basic production skills are few and far between.

The Pro-Action Education Network™ is here to address the skills gap in New Jersey. It created a career pathway manufacturing businesses can attach themselves to and reap the benefits of a revitalized talent pool.



EXPERIENCE



SKILLS

Creating a CNC Career Path

Offering Entry-Level Manufacturing Employees the Chance to Acquire New Skills

Manufacturers are searching for CNC operators or machinists that have decades of experience to replace a retiring workforce. The challenge being, there is an extremely limited number of these individuals available.



Creating a Talent Pipeline of Next Generation CNC Operators and Machinists

The New Jersey Manufacturing Extension Program (NJMEP) created a workforce solution for the state's manufacturers. NJMEP received approval from the U.S. Department of Labor (USDOL) to offer the first registered Industrial Manufacturing Production Technician (IMPT) CNC Apprenticeship in the state of New Jersey. Manufacturers can sponsor employees to take part in the CNC apprenticeship through NJMEP's Pro-Action Education Network™.

"NJMEP developed an innovative, nationally approved Computer Numerical Control (CNC) program that is discovering - and then delivering - exactly what skilled workers are looking for in today's career opportunities," said Patricia Moran, Director of Apprenticeships, NJMEP. "Skilled machinists are the lifeblood for manufacturers, but the local labor pool of skilled workers has been tight."

"There is a huge need for skilled machinists," John W. Kennedy, Ph.D, CEO, NJMEP explains. "This is an investment for both the individual and the company and a great opportunity for students to obtain an education without incurring student debt while gaining a successful career foothold in manufacturing."

Becoming a CNC professional takes a unique blend of hands-on experience, working knowledge of the fundamentals of machining, an understanding of the technology behind the equipment, and general manufacturing experience. These are the exact areas of focus in the IMPT CNC apprenticeship.

The breakdown of the 1.5-year CNC Apprenticeship program is available below:

- 3,000 hours of on-the-job training and classroom training hours
- Based on the Manufacturing Skill Standards Council (MSSC) Production Technician Certification
- Focuses on foundational production education with emphasis on CNC technology and CNC lab time
- The program curriculum includes: Print Reading, Measurement and Industrial Math, CNC Milling Setup Operations and Programming, Machining Process, CNC Lathe Setup, Operations, and Programming

"The job options are virtually limitless," Kennedy said. He goes on to offer examples of the breadth of industries these skills provide access to; aerospace, medical, and more.

New Jersey employers that want to create excitement about the manufacturing industry, improve their recruiting efforts, or up-skill their current workforce now have a partner. The NJMEP Pro-Action Education Network™ Apprenticeship Program is a way for employers to provide professional development opportunities. Furthermore, the Bridge to College Credits program, part of the Pro-Action Education Network™, allows employers to offer their apprentices college credits from the time spent in any NJMEP IMPT Apprenticeship Program.

Machining is becoming more complex and technology driven. This, coupled with the fact that it's becoming less high school students entering the workforce have any kind of technical experience, requires businesses to turn to educational programs when recruiting.

Finding that perfect hire, the CNC operator or machinist with years of experience has become a challenging task. Instead, businesses are left with open positions as their wanted ads collect dust. The NJMEP IMPT CNC Apprenticeship Program is designed to give manufacturers a way to cultivate a pipeline of talented manufacturing professionals. 🌈

A NEW JERSEY CAREER PATHWAY

The Pro-Action Education Network™ takes a unique approach to solving the Skills Gap. It includes short, medium, and long-term solutions all wrapped up into one comprehensive program.

Building a Pool of Workers

Pre-Apprenticeship - NJMEP partners with high schools to train students. These students acquire critical industry knowledge and fundamental manufacturing skills while in school. Pre-Apprenticeship candidates are then offered to manufacturers upon graduation.

Pre-Screen Testing Qualified Candidates - A call goes out to prove manufacturing competencies. Underemployed, recent graduates, or those looking for a career change have the opportunity to answer that call. These individuals are tested to prove their skill level. By taking Bennett Mechanical Comprehension Test, basic math, and reading comprehension tests, NJMEP pre-qualifies candidates. These candidates are made available to New Jersey manufacturers.

Upskill Current Employees

Upskilling Opportunities, Training, and Education - There are a host of opportunities offered by NJMEP. Manufacturers can enroll employees in basic measurement and blueprint reading courses all the way through advanced Six Sigma black belt certification training. Open Enrollment and Workshops are available to provide short-term upskilling solutions.

US DOL Registered Apprenticeship Programs - A comprehensive solution for an underskilled workforce. Manufacturers have the option to hire people with the right attitude and enroll employees in a US DOL Registered Apprenticeship Program to create well-rounded manufacturing professionals. Enroll a current employee in any of the five US DOL Registered Apprenticeships to increase employee loyalty and competency.

Bolster the Workforce for the Long Term

Bridge to College Credits - Manufacturers can offer employees the chance to expand their education for nearly no cost. Smaller businesses that can't offer complete tuition reimbursement can now participate in The Bridge to College Credits program. Employees enrolled in an NJMEP US DOL Registered Apprenticeship Program acquire college credits for their work in the program. Furthermore, apprentices can immediately enroll in NJMEP partner community colleges and take steps to achieve a bachelor's degree from NJIT or other New Jersey colleges in a major relevant to their career path.

Mentorship Training - Businesses that participate in an apprenticeship program, or any manufacturing operation that wants to offer substantial mentorship opportunities can participate in Train-the-Mentor. This course teaches critical skills every mentor should have. It strengthens important competencies even the most seasoned manufacturing professional may be underutilizing.

TAKING ACTION TO BOLSTER YOUR WORKFORCE

It takes a business leader to step up to the workforce challenge. NJMEP is making it easier to source new talent, engage current employees, and upskill incumbent workers. Manufacturers can utilize one aspect of the Pro-Action Education Network™ or any of the workforce solutions included in the program.

Manufacturers all over the country are calling for answers to the skills gap question. Every manufacturer may need some form of workforce development assistance but each business still requires a unique solution. New Jersey manufacturers have a wide variety of workforce development solutions and programs to meet their exact needs. Many Pro-Action Education Network™ opportunities are customizable to suit a specific business's employment requirements. Contact NJMEP today to learn more. The time to act and address the workforce challenge is now. 🌈



Saint-Gobain Apprenticeship Program Success Story



THE APPRENTICE PERSPECTIVE

Background

Saint-Gobain Performance Plastics is a world leader in producing engineered, high-performance polymer plastics and serves a variety of major industries around the globe. The company takes employee professional development extremely seriously. They heard that NJMEP was offering a US DOL Registered Industrial Manufacturing Production Technician (IMPT) Apprenticeship Program and wanted to take part. Saint-Gobain invited employees to join NJMEP's first apprenticeship cohort.

Challenge

Providing opportunities for employees to advance their careers is essential, but can be very challenging without the necessary resources. Saint-Gobain wants to engage its employees while ensuring they are gathering essential skills that will allow them to contribute more and find continued success within the organization.

Solution

NJMEP's US DOL Registered Apprenticeship Programs are an ideal way for employees to develop critical skills and acquire nationally recognized credentials without the need for an employer to handle the entire apprenticeship process on its own. By taking advantage of NJMEP's US DOL Registered Apprenticeship Program, part of the Pro-Action Education Network™, Saint-Gobain Performance Plastics sponsored three employees to take part in the year-and-a-half IMPT apprenticeship.

The value of the apprenticeship program for both the employer and apprentice becomes extremely clear after an interview with an employee who recently received a promotion.

Results

Luis approached his supervisor at Saint-Gobain about taking part in NJMEP's apprenticeship program. He recently received a promotion because of the skills he picked up throughout his time in the IMPT apprenticeship program. These skills include a working knowledge of the manufacturing process as well as soft skills, both of which are critical components of the IMPT apprenticeship curriculum.

Luis began his career at Saint-Gobain on the forming line, the last line of production where bearings are made. There was an opening in Lamination and two openings in Chamfering which are both promotions from Luis' entry-level position. To take part in a Registered Apprenticeship Program, Luis needed to work with a mentor. Once these positions in Lamination and Chamfering opened up, the apprenticeship program gave him the confidence to approach his mentor about applying for the promotion.

"When asked how he's using this experience to further his career, Luis said, "This apprenticeship experience has given me more confidence when talking to my supervisor and the engineers. I can talk to them on equal footing. I believe in myself more."

Additionally, NJMEP's Pro-Action Education Network™ partnered with Essex County Community College and NJIT to provide a seamless transition from apprenticeship to higher-education. Apprentices in NJMEP's US DOL Registered Apprenticeship Program can acquire up to 12 college credits by the time they complete the program. Luis said he is thrilled and excited to take part in the Bridge to College Credits program after his time spent as an apprentice.

"This is the perfect pathway for me," he said. Luis expressed that he wants to eventually become an engineer, and views his time as an apprentice as a critical first step in achieving this goal.

Both the employer and employee benefit from the time spent in Registered Apprenticeship Programs. The employee benefits through the education provided throughout the US DOL Registered Apprenticeship. The employer benefits by identifying and nurturing enthusiastic and passionate workers while cultivating new talent that they can put to work in other areas throughout the manufacturing operation. 🧩

THE EMPLOYEE PERSPECTIVE

Background

Saint-Gobain Performance Plastics is a world leader in producing engineered, high-performance polymer plastics and serves a variety of major industries around the globe.

To further Saint-Gobain's employee professional development initiatives, Sean Devlin took on the responsibility of becoming a mentor. The company has three apprentices currently enrolled in NJMEP's US DOL Registered Apprenticeship program, which is made possible through the Pro-Action Education Network™

Challenge

Saint-Gobain is facing a challenge that's become common among manufacturing businesses in today's current business landscape, recruiting and retaining workers. With manufacturing skills becoming harder to find, the company is forced to think outside the box when it comes to building their workforce.

"In 2018, we had 5 or 6 retire and 5 or 6 people leave for other opportunities. Our retention was extremely low. At one point we were at 60% staffing levels for our production floor, and we were a ton of overtime. We were having a hard time finding the people we need," Sean stated when discussing why Saint-Gobain was looking for new ways to attract and retain workers.

Luckily there is a partner that could provide the ideal workforce solution to meet their needs.

"We reached out to NJMEP because we've worked with them before for recruiting and it went well. That's when Torsten Schimanski [Pro-Action Education Network™ Program Manager] told us about the apprenticeship program."

Solution

"We started looking at people who had a wider variety of previous experiences. We started focusing more on people's personality in an interview setting. Some, of course, didn't work out but we found some really great employees that we can train so they have the skills they need."

NJMEP's US DOL Registered Apprenticeship program is an ideal solution for manufacturers that want to cultivate a talent pipeline. Saint-Gobain can hire from a wider group of people and train those individuals through the Registered Apprenticeship to provide the education and experience they need to contribute to and be successful within the organization.

"From a flexibility standpoint, it works out well. The in-class instruction is one day per week which is perfect because it doesn't really affect our production. And, they're still getting their full hours in, pay-wise."

Results

By providing employees with in-depth professional development opportunities, Saint-Gobain is rewarded with effort and loyalty from their employees. Employee retention and loyalty skyrocket and Saint-Gobain walks away from the apprenticeship program with qualified and highly-motivated employees.

Sean, production manager and mentor for Saint-Gobain apprentices, can see the impact of the Registered Apprenticeship program on the apprentices.

"Bryan came with a great work ethic from his time in the military. He has shown growth in both his leadership skills and business knowledge over the last few months. It is a common sight to see him helping out another operator who is struggling. And, he understands the direct impact quality and scrap have to the bottom line."

"Luis sees that we're investing in him by giving him this chance to gain some knowledge. He's applying for tuition reimbursement, and he's excited to use the credits he gets from the Bridge to College Credits program. He will be working toward his mechanical engineering degree."

"Nick has a lot of really good experience from working with Toyota and BMW, and they have good training programs. For him, it was getting experience with more of the manufacturing side of things. He has a better handle on part drawings, using micrometers, calipers and more." 🧩



New Jersey's Fifth Registered Upskilling Opportunity



Logistics Technician Registered Apprenticeship Program

New Jersey businesses now have access to a new United States Department of Labor (US DOL) Registered Apprenticeship Program. The New Jersey Manufacturing Extension Program (NJMEP) received approval to offer the Registered Logistics Technician Apprenticeship through the NJMEP Pro-Action Education Network™.

Manufacturers, distribution companies, and supply chain firms can all benefit from the education and hands-on training provided throughout the Logistics Technician Apprenticeship Program.

“The new Registered Apprenticeship Program complements our existing suite of apprenticeships in Industrial Manufacturing Production Technician (IMPT), Technical Sales Representative, IMPT Food, and IMPT CNC,” said Patricia Moran, Director of Apprenticeships, NJMEP. “Throughout industry, there is a shortage of apprentices and so we are continuing to make a significant investment in growing skilled technicians who can be the future of our businesses.”

Logistics Technician Registered Apprenticeship Overview and Opportunity

Logistics is a critical aspect of any manufacturing operation. Finding individuals with the right skills has become nearly impossible. To bridge the skills gap, businesses can hire a person based on attitude and personality and enroll them in a Logistics Technician apprenticeship to develop the skills an organization will need.

Registered Logistics Technician Apprenticeship Program Overview:

- 1-year program
- 2,000 hours of paid, on-the-job training and classroom training hours
- Based on the Manufacturing Skill Standards Council (MSSC) Logistics Technician Certification
- Focuses on the foundational supply chain education with an emphasis on Lean Standards and Six Sigma (Green Belt)
- Program content consists of Supply Chain Logistics, Material Handling, Equipment Operations, Quality Control, Order Processing, Inventory Control, Safety Measurement and more
- No educational costs for the student

“The Logistics Technician Apprenticeship Program addresses the core technical competencies of higher-skilled, front line material handling and distribution workers in all supply chain facilities,” said John W. Kennedy, Ph.D. CEO, NJMEP. “As the skills gap in New Jersey widens, NJMEP recognizes the important role of apprenticeships, which offer on-the-job training with classroom and online instruction, play in building a pipeline of future skilled talent,” continued Kennedy. “Our new registered apprenticeship program is designed to develop not only the skills they need to perform as technicians but support in learning life and business skills to enable them to progress their careers.”

Apprenticeships utilize a blended learning approach that combines on-the-job learning and in-class instruction. This two-pronged approach provides employees with a comprehensive overview of Logistics. Along with providing a strong foundation of Logistics knowledge, employees will develop the skills they will need to contribute more to their employers.

Apprenticeship Options and Employer Benefits

Logistics Technician is the fifth US DOL Registered Apprenticeship NJMEP is now offering. The full list is available below...

- Industrial Manufacturing Production Technician (IMPT)
- Technical Sales Representative
- IMPT Food
- IMPT CNC
- Logistics Technician

Manufacturers struggling to find qualified workers can use these apprenticeship programs to upskill their current employees. That is the clear benefit of an apprenticeship. However, there is another benefit that can be overlooked but is just as important as creating a talent pipeline. Businesses that invest in their employees' professional development will experience lower turnover and increased employee loyalty.

Any of the five Registered Apprenticeship Programs offered through NJMEP's Pro-Action Education Network™ provides the added benefits of increased employee loyalty and reduced turnover. When employees feel as though a company is investing in their future, they are much more likely to remain at that company. Furthermore, manufacturers, STEM firms, logistics companies, and supply chain organizations can choose from any of the Registered Apprenticeship Programs to best meet the needs of a company.

Seating is limited for each apprenticeship class. Companies that want to save their spot in any of the five US DOL Registered Apprenticeship Programs need to reach out to the NJMEP Pro-Action Education Network™ today.

New Jersey Manufacturers, Do You Have...

- Jobs that are difficult to fill with the right candidates?
- Positions that have high turnover?
- Occupations where a highly-skilled workforce is retiring soon?
- Challenges in motivating employees?
- Positions requiring skills that can be learned on the job?
- Difficulty attracting new and more diverse talent pools?



NJMEP offers 5 Registered Apprenticeship programs to close the skills gap:

Industrial Manufacturing Production Technician (IMPT)	IMPT Food
	IMPT CNC
Logistics Technician / Storage and Distribution Management	Technical Sales

Building Skills. Building Confidence. Building the Future.

Recruiting, training, and retaining talent is the most important thing employers do. The apprenticeship model allows employers to take charge of building their own pipeline of highly-skilled and highly-motivated workers. Apprenticeship offers a flexible training solution aligned with national industry standards and your company-specific standards.

Contact NJMEP today to learn more about the Pro-Action Education Network™.

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PAUL RETTBERG SAYS GOODBYE TO WEISS-AUG



Celebrating a Long Career and Ready for Retirement

Weiss-Aug is a custom insert molding, precision metal stamping, and assembly solution provider with a rich history and an unbelievable team. They touch the automotive, medical, electronic and semiconductor industries and pull from over 45 years of experience. This company based in East Hanover, NJ is ready to wish an important member of the team a happy retirement.

Paul Rettberg, Apprenticeship Program Manager, is ready to take a step back and see what this retirement thing is all about. He has been with the company since it was founded in 1972. He's watched Weiss-Aug grow from a four-person shop to a thriving group of manufacturers that employ over 200 individuals with four facilities located around the country.

Weiss-Aug's Rapid Growth and Paul's Support

The company continues to expand, offering additional services and products. From their humble beginnings, Weiss-Aug now offers services that range from Research and Development to Real-to-Reel Molding and Laser Welding just to name a few. All this growth requires a robust workforce.

The company was running into issues managing their expansive growth because so much manufacturing work was being shipped overseas. They needed to act fast so Weiss-Aug could continue to thrive right here in New Jersey.

"The only way
we were going to
keep the business
growing is to
create our own tool
& die makers."

To cultivate the company's own talent pool, the leadership at Weiss-Aug wanted to create an apprenticeship program. The company worked with Donna Scalia, Apprenticeship and Training Program Specialist, at the U.S. Department of Labor back in the late 70s to develop a USDOL Registered Apprenticeship program which follows a nationally recognized curriculum.

Proud to Share His Knowledge

Paul Rettberg was extremely proud to be discussing the story of the apprenticeship program. There was great pride in his voice as he described his own experience as an apprentice and the work Weiss-Aug continues to do on the workforce development front. He stated that some of the apprentices who graduated from the first apprenticeship class are managers at Weiss-Aug today.

Without a team made up of individuals who shared the same passion as Paul, Weiss-Aug would have had no chance of becoming the company they are today. He is a forward thinker and a kind man, both attributes that make for a great mentor and leader. It wasn't hard for him to realize the value of the apprenticeship program. Paul was an apprentice in 1962 where he acquired the skills that allowed him to thrive in a career that spanned over fifty years. This fact made him the perfect candidate to lead the latest iteration of the Weiss-Aug's apprenticeship program.

A Registered Apprenticeship Too Valuable To Lose

2008 was a difficult year for all businesses. The financial crisis forced Weiss-Aug to step back from their USDOL Registered Apprenticeship program. Management got together in 2010 to jumpstart the program. Since technology has changed so dramatically since the original Registered Apprenticeship started in the late 1970s, the company needed to revise the program and get it re-registered with the USDOL. Donna Scalia once again helped Weiss-Aug develop and refine their curriculum. After Weiss-Aug officially registered their 21st-century apprenticeship program, Paul Rettberg was given the opportunity to lead the initiative.

Paul has been in charge of Weiss-Aug's USDOL Registered Apprenticeship Program since 2011. However, he's ready to retire and let the next generation of manufacturers continue moving the company forward, many of them trained under his leadership. He said the biggest benefit of the program is that many of the apprentices ended up staying at Weiss-Aug. Some did leave, but most individuals stay with the company for the majority of their careers.

It's challenging to find people that are passionate about a company. Paul is one of those unique individuals that have the humility to step back and praise his company, not just his accomplishments, even during an interview about his time at Weiss-Aug. "Forget about me, it's about Dieter Weissenrieder and the people," said Paul.

Apprenticeships are a proven way for manufacturers to cultivate a strong and loyal workforce. Weiss-Aug recognized that developing a Registered Apprenticeship program would be a valuable way to address the workforce shortage in the late '70s. For the past nine years, Weiss-Aug has used its USDOL Registered Apprenticeship to address the workforce challenges in the 21st century with glowing success. Paul Rettberg has been instrumental in its success and has played a role in the massive growth Weiss-Aug experienced over the past 50 years.

Weiss-Aug is losing a valuable member of the team. The New Jersey manufacturing community is losing an incredible advocate as well. Everyone at NJMEP is wishing Paul Rettberg an extremely relaxing and happy retirement. 🍷



NJMEP's South Jersey Apprenticeship Class 100% Pass Rate on MSSC's Safety Module

The New Jersey Manufacturing Extension Program Inc. (NJMEP) partnered with Rowan College at Burlington County (RCBC) to host a South Jersey United States Department of Labor (USDOL) Registered Apprenticeship class and the results are spectacular.

Industrial Manufacturing Production Technician - South New Jersey Apprenticeship

Apprenticeships are once again providing manufacturers the opportunity to develop a committed and reliable talent pipeline. New Jersey businesses are coming together with the help of NJMEP's Pro-Action Education Network™ to train their workforce and provide them with invaluable experience. Manufacturers from South New Jersey approached NJMEP to enroll students in the Industrial Manufacturing Production Technician (IMPT) USDOL Registered Apprenticeship program.

Workers that take part in NJMEP's IMPT apprenticeship are exposed to a blended curriculum, designed to improve their manufacturing skills and knowledge.

Industrial Manufacturing Production Technician Registered Apprenticeship Program Overview:

- 1.5 Year Program
- 2,736 of On the Job Training
- 264 hours of Related Technical Instruction
- Fundamental
- Technical Education
- MSSC Credentials
- Safety Awareness
- Quality Assurance
- Production and Process
- Maintenance Awareness

NJMEP's RCBC Apprenticeships - 100% Pass Rate on MSSC's Safety Module

Through a partnership with RCBC, NJMEP can provide South Jersey manufacturers with a way to upskill their workforce. Hosted on the RCBC campus, manufacturers from three different companies enrolled multiple employees in the USDOL Registered IMPT Apprenticeship Program. Students undergo related technical instruction from an expert in the field. The apprenticeship program is



modeled off of four credentials maintained by the Manufacturing Skill Standards Council (MSSC).

The apprenticeship class has completed the test on the Safety Awareness MSSC credential. Safety is the first MSSC module covered in the IMPT Registered Apprenticeship Program. Every student in the apprenticeship class passed the Safety Awareness module. This is a testament to the quality instruction and drive of each apprenticeship taking part in the USDOL Registered IMPT Apprenticeship hosted at RCBC.

A 100% pass rate means that every student can continue forward with their education as they take the next step through the IMPT apprenticeship journey. There are three more MSSC credentials to complete. As the apprenticeship continues into 2020, these students will be acquiring even more critical skills that they will bring back to their employers.

What the South New Jersey Apprentices Are Saying

After the news of the apprentices receiving a 100% pass rate on the MSSC Safety module, NJMEP checked in with some of the students. Their experience so far has been exceptional. Each apprentice is absorbing the knowledge to bring these newly acquired skills back to their employers.

Justin, from EWC Controls Inc - "The program has been great. It's teaching a lot of things that will help further my career. It's great that [EWC Controls] is investing in our future."

Donna, from QPSI - "The class has been great and a huge benefit to our company. We're starting a new safety initiative at our company so all of us in this class are now on the safety team. We've been able to take the skills from the first MSSC module and implement them."

TRENTON



TALK

MANUFACTURING REALLY WILL MATTER IN 2020



**BY: SENATOR LINDA R. GREENSTEIN,
DISTRICT 14
CHAIR, NJ BIPARTISAN LEGISLATIVE
MANUFACTURING CAUCUS**

New Jersey was given our enduring moniker 'The Garden State' by Abraham Browning of Camden in the late 19th century. Mr. Browning touted our prime location and bounty of agricultural produce, describing New Jersey as an "immense barrel, filled with good things to eat and open at both ends, with Pennsylvanians grabbing from one end and New Yorkers from the other." Though a century old, the quote and depiction of New Jersey still rings true.

However, instead of consuming our produce, our neighbors reap the benefits of our manufacturing prowess. Between its prime location, expansive transportation infrastructure and large supply of skilled labor, our state is primed for prolonged growth and sustainability in the manufacturing sector. I am in no way suggesting that we change our beloved title of 'Garden State,' but the evolution of our great state has pushed us toward a new meaning of Garden State. We are no longer just a barrel open at both ends, but a powerful engine driving commerce up and down the east coast.

Three years ago, the legislature and key stakeholders from around New Jersey saw a need to create a mechanism by which local manufacturers and businesses could communicate more efficiently. The answer became clear after Senate President Sweeney (D-Gloucester) and

John W. Kennedy (NJMEP) created the New Jersey Legislative Manufacturing Caucus. I have always cared deeply about the health of our state and have viewed the success of our local manufacturers as a key indicator of that health.

With my dedication to growing manufacturing in New Jersey, while focusing on sound policy in Trenton, I jumped at the chance to become the Chair of the Caucus. Since becoming Chair, my colleagues and I have worked tirelessly to push an agenda that includes a package of bills reforming apprenticeship programs, investing in local infrastructure to support the growth of manufacturing, and began looking at how we can create a pipeline for high school students to find careers in the field.

A key policy initiative we are currently working on is the funding from the Securing our Children's Future Bond Act. This will provide much needed capital for vocational and technical schools and will help manufacturers fill jobs in need. This year the Legislature

will continue to work toward enhancing apprenticeship programs. We have all heard about the talent shortage and the many skilled manufacturing jobs that could go unfilled if nothing is done. Action must be taken to combat these concerns. These days, we know that apprentices can be used in a vast array of fields from healthcare, hospitality, construction, and especially in manufacturing.

This year we have embarked on an ambitious new plan to reinvigorate the Legislative Manufacturing Caucus. We will be holding regional round tables and hearings throughout the state to engage with local businesses and manufacturers in their own communities. Our conversations with the manufacturers, local businesses and stakeholders will inform us as to how we, as a legislative body, can help craft policy with our partners in the communities we visit.

As we move into this new decade, it is critical to remember the tremendous progress New Jersey has made in the manufacturing arena. Our highly educated workforce and world-class infrastructure have made New Jersey a prime location for major relocations and expansions. Manufacturing continues to re-invent itself as a high stakes player in New Jersey's economy.



ADVANCED MANUFACTURING POLICY ACADEMY UPDATE EVENT

BY: DOUG YORKE NJEDA SECTOR LEAD
– ADVANCED MANUFACTURING

NJMEP and NJEDA co-hosted a meeting in Trenton in January to update participants on the Advanced Manufacturing Policy Academy work that the two organizations had worked on going back to late 2018. Attendees included members of industry, state government (including Sen. Linda Greenstein, who leads the NJ legislature's Manufacturing Caucus) and members of several other organizations that had participated in the Policy Academy's work.

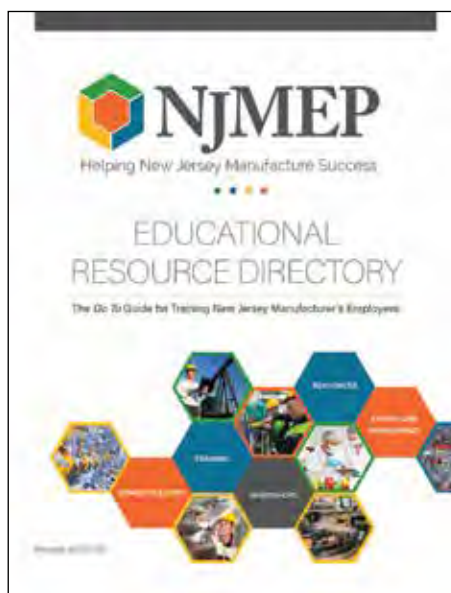
Tim Sullivan, CEO of NJEDA, opened the two-hour afternoon event by talking about the importance of advanced manufacturing to the Governor's overall economic development plan. He was followed by NJMEP's CEO John W. Kennedy who talked about the role and sweep of NJMEP in New Jersey's manufacturing sector and his appreciation for the increasingly close partnership with NJEDA. Event emcee, Brian Sabina, the EDA's head of the Office of Economic Transformation, then introduced Doug Yorke, whom the EDA had recently brought on as Sector Lead for Advanced Manufacturing.

The meeting was divided into two parts, each about an hour long. The first part focused on three main initiatives that came out of the Policy Academy and were worked on in 2019. They included:

NJMEP EDUCATIONAL RESOURCE DIRECTORY

This is a detailed guide aimed at helping manufacturers across the state identify and connect with resources in the fields of education (secondary and post-secondary) and government (state and local) that might be useful to them. In it, users will find information on accessing training programs, workshops and other forms of assistance, in most cases including specific contact names and phone numbers or email addresses.

The Educational Resource Directory



is in searchable PDF form and may be downloaded from the NJMEP website via: njmep.org/educational-resource-directory/

MARKETING AND OUTREACH


The Policy Academy had identified the shortage of younger workers coming into the manufacturing industry to replace retiring baby boomers as a major concern. Participants identified a concern that potential workers perceived manufacturing jobs as dirty, strenuous and monotonous, a perception rightly viewed as being badly outdated. To deal with that misperception, the NJEDA launched a pilot program with the Ocean County Vocational and Technical School (OCVTS) that brought high school students (and in another trip high school guidance counselors) from around the county into OCVTS to hear from manufacturers about what they do and how they do it. Importantly, the pilot involved one giant step outside the classroom: factory tours. Students were taken to local manufacturing sites where they saw and, in some cases, touched how products are made today. The pilot program was a tremendous success and NJEDA plans on rolling it out to other counties in 2020.

APPRENTICESHIPS

A clear need exists in New Jersey for providing skilled workers and enabling those workers to pursue post-secondary education. To that end, the Policy Academy (which included representatives from the NJ Department of Labor and Workforce Development) looked hard at how to build and populate a more effective program of apprenticeships.

Nick Toth, Assistant Director in NJLWD's Office of Apprenticeship, spoke on the energy that was mounting in the area. He noted that in the last year there had been a 57% uptick in registered apprenticeship programs and a 25% increase in apprentices. He believes that because of the state's "GAINS" grant funds, this rate of growth will continue.

The second part of the meeting was structured as an open dialogue that began with participants discussing what is going on within their companies or organizations. Surprisingly – but also not surprisingly – almost everyone had projects or activities or news to share, so much so that time ran short. Nonetheless, there was a broad conviction that being able to continue to share ideas and voice concerns about the industry was an essential part of keeping New Jersey competitive. The last few minutes of the afternoon turned back to the Policy Academy and how it could be morphed into an industry working group or advisory council in 2020.

NJMEP and NJEDA agreed to put out a call to industry to act on this front. Any manufacturer interested in participating in a group aimed at sharing industry ideas and concerns should contact NJMEP or NJEDA for further details. 

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and frustration out of
business lending.**

We're a \$7 Billion Bank specializing in business loans and commercial mortgages. Our team of experienced professionals deliver face-to-face, personal service to every client regardless of size.

Our rates are highly competitive on loans and lines of credit. Decisions are made right here, on a local level. We handle every detail so the process is fast, efficient and easy for you.

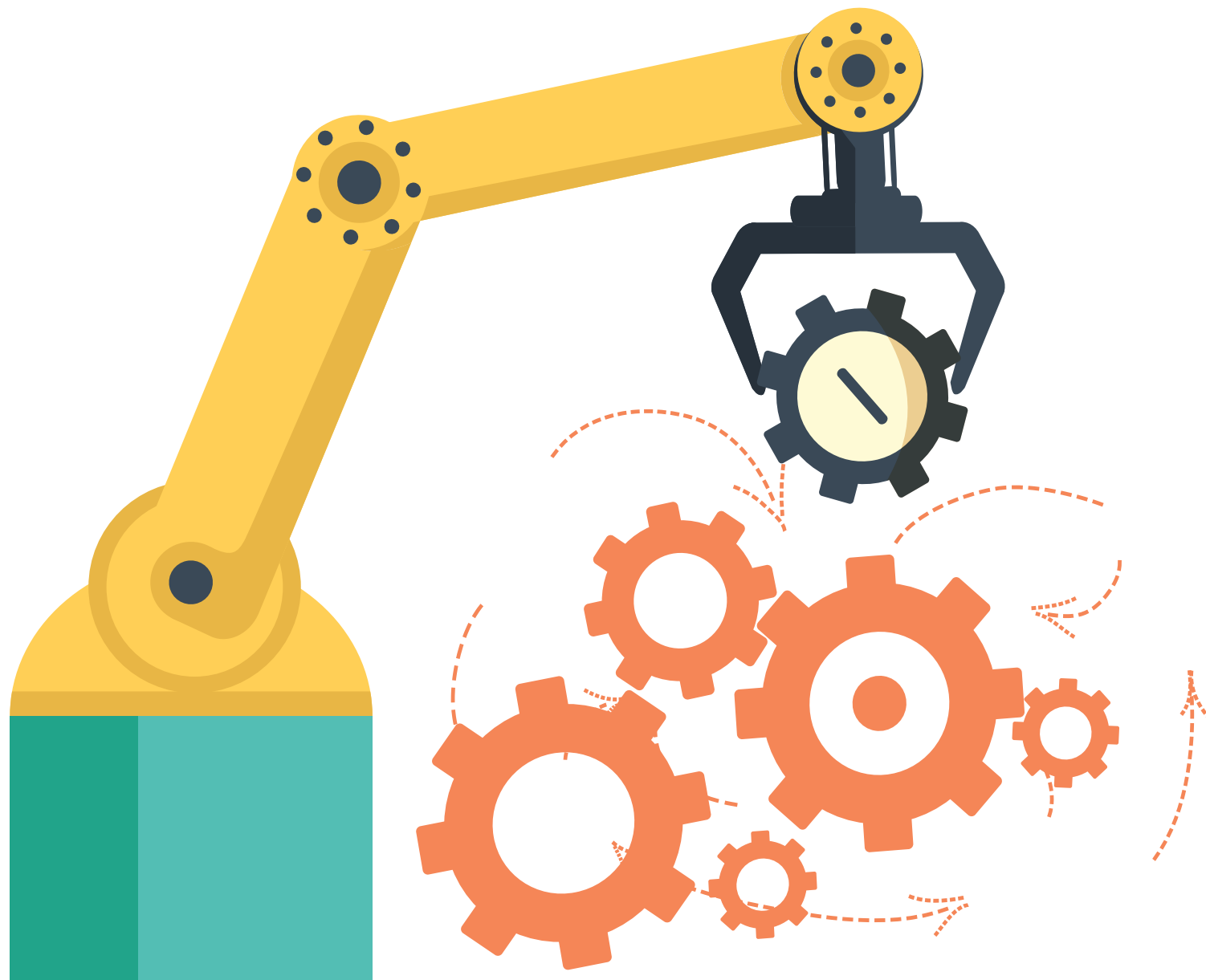
Obtaining the capital you need to grow your business shouldn't be a hassle. Contact us to learn how 'Stress-Free Business Lending' can work for you.



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MEMBER
FDIC





Don't Get WIPPED!

Many manufacturers are taking unnecessary risk by not focusing enough attention on WIP (Work In Progress). Although there is a certain amount of WIP that is necessary within all manufacturing operations, not managing the how much WIP there is and the dollar value that it represents can result in your company getting "WIPPED" in the following ways:

1. Unexpected Losses
2. Lower Productivity
3. Tied Up Working Capital

Let's look at a real world example. I was hired to help a midsized manufacturing company with cash flow issues. Excess WIP exacerbated the situation. They had hundreds of thousands of dollars invested in excess WIP when they really needed it for paying suppliers. Suppliers started cutting them off which led to inefficiencies and inability to deliver products on-time. Lack of enough raw material reduced productivity of the workforce causing lower profitability and less cash flow from operations. This was a vicious cycle that could only be overcome by external financing. To make things worse, the company had to make a significant inventory adjustment due to excess waste and damaged WIP. The adjustment wiped out all of their profits for the year making them unbankable, requiring them to seek alternative financing with significantly higher fees and interest rates.

Fortunately, they hired a better production manager, upgraded their ERP system, implemented LEAN manufacturing processes, and systematically counted actual inventory on a weekly basis. The financing gave them room to breathe by providing the necessary funds to purchase inventory, increase productivity, and ship more products. The experience required them to actively manage orders and inventory levels weekly to minimize excess WIP or raw materials.

Nobody likes unexpected losses on WIP that could have been avoided resulting from increased waste, damages, and shrinkage. Having too much WIP laying around increases the likelihood of these things happening by creating a cluttered environment and lower accountability. **Don't get WIPPED with unnecessary losses!**

Excess WIP tends to lower productivity. Lower productivity costs manufacturers billions of dollars annually. It increases costs and reduces profitability. That reduction in profitability has a significant negative impact on the value of a business. Plus, it decreases output and capacity which increases lead times, negatively impacts customers, and hurts growth. **Don't get WIPPED with lower productivity!**

The cost of maintaining unnecessary levels of WIP is two-fold. First, WIP takes up valuable production space that could be used for other purposes which may result in leasing additional space. Second and most importantly, working capital tied up in extra WIP reduces


liquidity and can cause cash flow issues at a time when customers are taking longer to pay. **Don't get WIPPED with tied up working capital!**

The following techniques can be used to eliminate excess WIP so that you are able to avoid getting WIPPED...

1. Forecasting and Tracking WIP Levels with ERP systems
2. Implement LEAN Manufacturing Processes
3. Adding Machines and Cross-Training Workforce

The practices outlined above not only increase productivity, they also improve profitability. Adding extra machines and providing lean training for the workforce will improve quality, improve production output, and drastically reduce defects. In addition, lowering WIP levels makes it easier to identify bottlenecks quickly and rectify them in a timely manner. Not only will managing WIP reduce risks, it will increase capacity and improve profitability. Plus, there can be other ancillary benefits of reducing WIP such as less clutter leading to a better work environment and fewer accidents. Implement these methods today to enhance and grow your business and avoid getting WIPPED! 🧩

BY: ANDREW FRAZIER, MBA, CFA, PRESIDENT AND COO OF A&J MANAGEMENT, NJMEP BUSINESS GROWTH SERVICES (BGS) RESOURCE



EU MDR/2017/745 IMPLEMENTATION DATE IS MAY 26, 2020...

ARE YOU READY?

The new Medical Device Regulation 2017/745 was voted on and approved by the EU in April of 2017. It replaced two Medical Device Directives [MDD] and expanded the list of devices that fall under the regulation.

While the goal of the change is admirable; to improve product quality and patient safety, the implementation has not been. With less than 6 months to the effective date, few of the over 400,000 original medical devices covered have been recertified [and all need to be]. The problem is not the lack of desire by manufacturers, but the lack of certified Notifying Bodies that can review. The regulation still has three medical Device classifications [I, II, III] but the amount of documentation and technical information is significantly more. The good news is that while the date remains the same, the regulatory bodies responsible recognize that not all devices or parts of the regulation can/or will be ready by the effective date. That leaves many device manufacturers in the state with a dilemma: cram to meet the deadline, or 'kick the can down the road' until compliance is absolutely necessary.

Depending on the classification of a device, there is a third option: Review compliance with the new regulation and implement the necessary changes over the anticipated two-year window that regulators may allow for compliance. It's hard to predict what the final outcome will be [and Oh, don't forget that the United Kingdom is exiting the EU on January 31st] but the reasons for the change are valid and device makers would be wise not to delay putting an action plan together and make the effort now to comply before the chaos that will ensue once the regulatory bodies start enforcing.

Below are some of the major changes to how medical devices can be marketed and sold in the EU:

RECERTIFICATION: All medical devices must certify that they are compliant with the new regulation. There are no grandfather exceptions. Keep in mind that the 400,000+ number includes those devices registered under the MDD. They do not include the number of products that now fall under the regulation, or new products being introduced. And then there's the UK.

EU UDI: Like the FDA, the EU decided that each device will need a Unique Device Identifier [UDI], but they have

not adopted the FDA model, so there will [could] be two sets of UDI's for each device.

POST MARKET SURVEILLANCE [PMS]: The regulation requires more than just a toll-free continuously improvement.. All this info will be in EUDAMED, a single database for regulators, Notifying Bodies and consumers to access.

EUDAMED: The centralized database [clearing house] for all the medical device information. Already postponed for at least two years...again, those working toward compliance will hit a brick wall here. So, where do you go to recertify? Good question, there is no clear answer.

QUALITY AND RISK MANAGEMENT: Not ISO 13485:2016 certified? The regulation adopts this ISO certification as a minimum for all devices. Risk Management which is part of all recent versions of ISO standards requires management to have an active program that reviews risks and implements plans and programs to eliminate them from the device throughout its entire life-cycle.

TECHNICAL DOCUMENTATION AND LABELING: The level of disclosure is much deeper and the labeling and instruction for use must be in the local languages and

the list goes on and on. Needless to say, after reading the entire regulation and its 123 Articles and 17 Annexes, it's clear that whatever documentation and clinical testing a manufacturer may have done, it's probably not enough to be compliant with the new regulation.

IMPORTING AND DISTRIBUTION: Finally, the biggest impact on everyone in the supply chain is the requirement that all participants within the EU must make sure that their supplier [whether manufacturer, importer or distributor] is compliant to the new regulation. Everyone is responsible for monitoring everybody else.

What are the best next steps to take? The first step is establishing an understanding of the current standing of a manufacturing business and what needs to take place to meet the new regulatory requirements. NJMEP can conduct an assessment of New Jersey manufacturing operations and provide the necessary gap analysis to put together an action plan that makes sense for that unique operation. Since 2000, NJMEP realized more than \$3.8 Billion in value. NJMEP has helped manufacturers, including medical device makers, become more productive, profitable, and compliant in the ever-evolving global economy. 🌐



WORKFORCE DEVELOPMENT

HUMAN RESOURCES TRAINING FOR MANUFACTURERS - Available in 2020

Manufacturers can sometimes think their business revolves solely around the product. However, people are what make manufacturing possible. Now there's a way to provide Human Resource training and upskill an organization's entire workforce.

Human Resources is at the heart of every manufacturing operation. According to a study conducted by Bamboo HR, onboarding matters so much that over 50% of employees who had a poor onboarding experience think their company is doing poorly overall.

The American Staffing Association Workforce Monitor survey reported that 60% of employees think employers are to blame for the skills gap. Additionally, 90% think employers could do more to teach in-demand skills.

Having an HR manager with a strong understanding of career development programs and the skills to engage the workforce is critical. A properly trained HR employee will have a dramatic impact on recruitment and retention. The highly competitive manufacturing industry makes it difficult to retain and recruit qualified individuals. Having an HR staff with the right skills will make a tremendous difference in the ability to find and keep those critical employees.

Training and Professional Development

Many business leaders will assume offering training and professional development opportunities for manufacturers is a challenge. The thought of including education and training for HR staff may sound overwhelming. There is a way for businesses to provide training in both these areas. The New Jersey Manufacturing Extension Program Inc. (NJMEP) is here to help manufacturers. Now, in 2020, NJMEP will provide professional development courses focused on supporting Human Resource staff.

Human Resources is a complex department. People are a manufacturer's most valuable resource but also the most dynamic. An HR professional requires a host of skills to ensure personnel has all the support they will need to conduct their job effectively and efficiently.

10 CRITICAL SKILLS FOR HUMAN RESOURCE PROFESSIONALS IN MANUFACTURING

- Change Management
- Conflict Resolution
- Identifying Employment Issues and Risks
- Workforce Engagement
- HR Policies and Procedures
- Industrial Communications Skills
- Ability to Present Information
- Problem Solving
- Team Building
- Time Management and Goal Setting

Business owners that want a workforce prepared for whatever situation comes their way, must invest in their people. Finding that perfect hire is exceptionally rare. There are so few individuals that have the exact experience needed, and passion for a company. A business can instead create their ideal employee.

Investing in a person's professional development can have a massive impact on that individual's impression of a business. They will want to do more. They will put those skills to use.

Manufacturers benefit greatly by upskilling their HR department. Those individuals have new skills and loyalty improves. Having an HR staff that will put those new skills into action is invaluable. Trained staff can handle interoffice conflict, build effective teams, and employ the countless other HR skills effectively throughout an organization.

2020 will be the ideal time for manufacturers to upskill their workforce. NJMEP is adding human resource training to the already wide variety of courses available. In addition to the manufacturing skill-based courses, businesses can enroll their HR staff in workshops that cover 10 critical skills, along with many more. 🧩



FOOD TRAINING

A wider reaching global supply chain exposes our food—and those companies within the food supply chain to increased risk. New Jersey Manufacturing Extension Program (NJMEP) supports manufacturers and those within the supply chain managing operational risks, achieve food safety regulatory and certification standard requirements, and realize sustained business value.

Focused on Business Results

Over the last few years the food Industry and its supply chain has become increasingly more complex in regards to food safety and compliance with the advent of the Food Safety Modernization Act.

NJMEP FOOD SAFETY INDUSTRY EXPERT HAS:

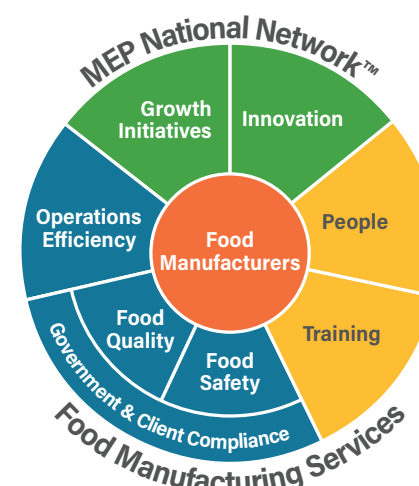
- An in-depth understanding of the Food Safety Modernization Act (FSMA) and third party certifications such as SQF, BRC and FSSC 22000
- Guidance in evaluating which food safety certification would best accommodate your business and markets you choose to participate in.
- Pre-audit guidance and Gap analysis to better prepare your business for a FDA audit.
- Individual & Customized Training on Numerous Food Safety Specific topics

OUR CAPABILITIES AND EXPERTISE GO WELL BEYOND FOOD SAFETY COMPLIANCE AND CERTIFICATION

Unlike other food safety consultants, we bring a holistic approach to food safety compliance by combining extensive, practical hands-on experience, with a clear understanding of the business imperatives that are crucial to your success.

The food manufacturing experts at NJMEP can help you with all aspects of your business, including

- Business Growth Services including Strategic Planning, Lead Generation and Marketing Assistance
- Supply Chain Management and Logistics Cost Reduction
- Business Efficiency services including Lean Manufacturing Techniques & Plant Layout, and Cost Segregation Services



Training

No matter how large or small the organization, a food processing facility should regard food safety and concern for public health as its number one priority.

To meet your food safety training needs NJMEP offers a wide array of food safety courses including but not limited to:

TRAINING COURSE	COURSE LENGTH / HRS
cGMP Requirements & Readiness	8
Cleaning and Sanitation	8
Corrective Action and Root Cause Analysis	16
FDA Food Labeling Nutrition Facts	8
Food Allergens	8
Food Defense – Intentional Adulteration	8
Food Recalls and Withdrawals	8
FSPCA Foreign Supplier Verification Programs	16
FSPCA Preventive Controls for Human Food	20
HACCP	16
Internal Auditing for Food Safety	
Management Systems	16
SQF Practitioner	16

Online Food Training

Online food safety courses are ideal for employees that want a self-paced approach to training. These online classes are fantastic options for workers that need a refresher or those that will eventually take in-person training courses in the future.

Currently, cGMP Readiness and Food Allergens is offered online.

Certification and Compliance

Every company has an obligation to its customers to provide safe and quality food. In addition, a growing number of companies require their producers and suppliers to implement a certification program. Certification to a GFSI-certified standard (e.g., SQF, IFS, BRC, FSSC 22000) demonstrates that a company is working actively to manage its food safety risks.

CONNECTING COMPLIANCE AND CERTIFICATION

It is difficult for companies to devote the resources required to maintain compliance activities at a sustained and satisfactory level—but it is essential. NJMEP understands the importance of developing and maintaining key internal controls that ensure the reliability of compliance systems and meet certification requirements.

Our experts help companies select the food safety standard that best aligns with business objectives and capabilities to ensure that compliance methods are optimized. We then manage the entire compliance and certification readiness process, working directly with onsite employees to mitigate risks, ensure certification, enhance market reputation, and drive business performance.

COMPLIANCE/CERTIFICATION SERVICES

- FDA/FSMA compliance
- GFSI/HACCP/GMP certification readiness
- FSSC 22000, IFS, SQF, BRC certification consulting
- HACCP food safety plan development
- HACCP-certified training
- GFSI strategy, business plans, and implementation support
- GFSI integrity audits
- Training and certification for internal auditors
- Internal audit process development
- Process verification/validation
- Process improvement and redesign

BUSINESS GROWTH SUITE

Manufacturers must continually innovate – develop new products, explore new marketing venues, adopt new business models, and proactively respond to shifts within their industry – in order to retain current customers, increase revenue, and expand into new markets. NJMEP can help you evaluate markets and competitors, identify opportunities to diversify, and help your company create, as well as implement, a road map to accelerated growth.

NJMEP’S BUSINESS GROWTH SUITE OF SERVICES (BGS) is a comprehensive catalogue of various programs delivered by many of our key subject-matter resources; each with intimate familiarity with the nuances of the manufacturing and supply-chain industries.

Starting with an in-depth assessment processes, to reveal the unique challenges facing your company, as well as to define your specific growth targets, the BGS program focuses on specific modules to assist you in:

- Increasing sales
- Diversifying your customer base
- Strengthening your firm’s processes and culture for innovation
- Building your company’s brand/reputation
- Maximizing your finances and margins

BGS MODULES

- Strategic & Financial Planning
- Innovation
- Marketing, PR, Advertising & Promotion
- Sales Techniques, Strategies & Training
- Web-based Growth



ADVERTISE IN MANUFACTURING MATTERS

REACH OVER 14,000 NEW JERSEY BUSINESS LEADERS!

Get your message in front of New Jersey small, medium, and large manufacturers and logistics companies!

Every quarter Manufacturing Matters is sent out to over **14,000 New Jersey business leaders** in both digital and print formats. It is the perfect way to get your message to the masses. The audience consists of a targeted list of New Jersey decision-makers in the manufacturing and logistics industry.

With a wide variety of advertising options and rates, there's an opportunity for any size business. Legislatures can even use Manufacturing Matters to reach businesses in their districts.

To learn more about advertising in Manufacturing Matters, contact NJMEP today!

Michael Womack, Marketing Outreach Coordinator
p: 973-998-9801 | e: mwomack@NJMEP.org
w: www.njmep.org

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See applications and test products at our Spring Open Houses

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RSVP or request an on-site demonstration at your company: solutions@knottssco.com or 908-464-4800

Gear Up for Manufacturing Day 2020

October 2, 2020, Marks NJMEP's Ninth Annual 'Made in New Jersey' Manufacturing Day Celebration!

'Made in New Jersey' Manufacturing Day is the largest networking event of its kind for the New Jersey Manufacturing Industry

**SPONSORSHIPS FILL UP FAST
SO NOW IS THE TIME TO ACT!**

Contact NJMEP today to reserve your spot and leave an impact on the over 600 manufacturers expected to attend.



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