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NJMEP

SUCCESS STORIES



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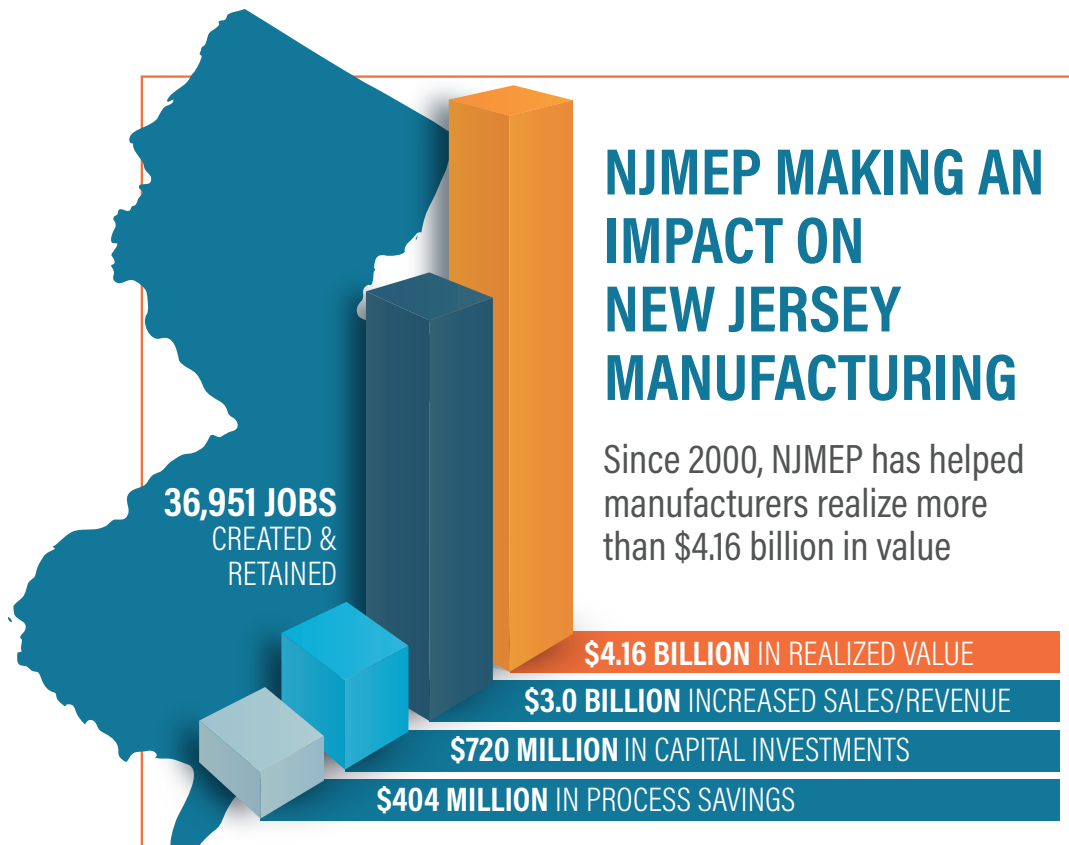
Helping New Jersey Manufacture Success

SUCCESS STORIES

NJMEP serves as trusted business advisors and technical experts to New Jersey manufacturing companies. NJMEP has helped thousands of manufacturers improve operations, increase profits, create or maintain jobs, and establish a foundation for long-term business growth and productivity.

Our Success Depends on Yours

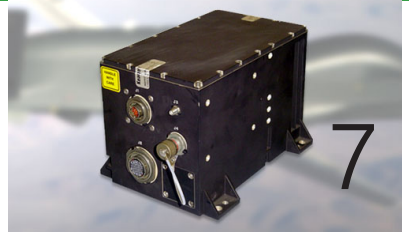
After completing a project with NJMEP, our clients are surveyed by an independent third party to gauge the impact of our services on operational performance. Focus is placed on jobs retained or created, investments made, sales generated or retained and the calculation of cost savings.





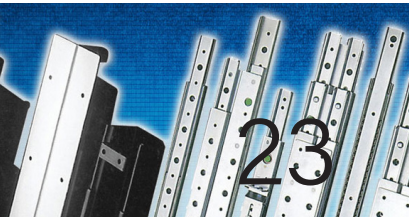
INNOVATION & GROWTH

SHAMROCK TECHNOLOGIES, INC.....	4
DESIRON.....	5
UNEX.....	6
KEARFOTT CORPORATION.....	7
PARAMOUNT PLATING COMPANY, INC.....	8
TROPICAL CHEESE.....	9
SJ PRINTING.....	10
GARDEN STATE PRECAST.....	11
FIDELITY INDUSTRIES.....	12
KNICKERBOCKER MACHINE SHOP.....	13



OPERATIONAL EXCELLENCE

CONNECTOR PRODUCTS INC. (CPI).....	14
ABSECON MILLS.....	15
CROWN ROLL LEAF, INC.....	16
SABERT CORPORATION.....	17
TRI-POWER DESIGN LLC.....	18
CALIFORNIA CLOSETS.....	19
HOWMAN ENGINEERING.....	20
STAR-GLO INDUSTRIES.....	21
H & W TOOL COMPANY.....	22
GENERAL DEVICES.....	23
MINCING OVERSEAS SPICE COMPANY.....	24
FALSTROM COMPANY.....	25
PRECISION CUSTOM COATINGS LLC.....	26



WORKFORCE DEVELOPMENT

ZYTRON CONTROL PRODUCTS.....	27
VEHICLE SAFETY MANUFACTURING.....	28
HENRY TROEMNER LLC.....	29
NOVEL INGREDIENTS.....	30
ATLANTIC CASTING AND ENGINEERING.....	31



Innovative Manufacturer Achieves Objectives with Workforce Training

For nearly 75 years, **Shamrock Technologies, Inc.** has been the innovator and pioneer in developing tribological additives, i.e., materials to resist rubbing, abrasion, wear, and providing slip or low coefficient of friction. Today, the company employs 91 people in New Jersey and has over a half million square feet of manufacturing operations at six facilities on three continents. Located in Newark, New Jersey, Shamrock's materials are found in Inks and Coatings, Thermoplastics, Lubes and Greases, Elastomers, Personal Care products, and many more applications.

Shamrock wanted to improve the competency and leadership skills of their supervisors, increase operational efficiency and resolve difficult factory floor issues in order to continue the company's focus on quality. As a result of a telemarketing call to Joe Shade, CFO of the company, New Jersey Manufacturing Extension Program, Inc. (NJMEP) met with management to identify Shamrock's needs. Key personnel from production, engineering, safety, quality and administration explained to NJMEP that a number of courses had been offered approximately 5-7 years ago and there is a desire for more. Shamrock Employees have a basic understanding of Lean and its value as well as the importance of plant safety.

As a result of the meeting a training plan was developed to improve factory efficiency, reinforce plant safety, increase equipment run time, reinforce the focus on maintaining quality and continue to build the skills of those who interface with Shamrock's clients. NJMEP identified the company as an excellent candidate for a New Jersey Department of Labor (NJ DOL) Skills4JerseyGrant. An application was prepared and when approved training began.

Over the course of one year, 35 employees participated in the training that included courses in:

- Supervisory Training (Part 1 & 2)
- GMP (Good Manufacturing Practices) Awareness,
- Lift Truck Safety
- Hazcom
- Internal Auditor Training
- Developing Customer Service Skills
- Six Sigma Employee Awareness
- Root Cause Analysis-7 Step
- Total Productive Maintenance (TPM)

Plant manager Nick Neuberg, who completed the required grant closeout paperwork, reported, "The NJ MEP really knew the application process so we were very pleased at how smoothly the process went. We reached our objectives with this grant—improved factory efficiency, reinforced plant safety, increased equipment run time, reinforced the focus on maintaining quality and our employees have built stronger relationships and have increased satisfaction with those who interface with Shamrock clients. With these objectives reached and an increase in business we were able to create jobs over this past year."

Mr. Neuberg, continued, "The company has seen overall improvement with the competency and leadership skills of their supervisors, managers and high performers which is the result of the supervisory skills training. Shamrock Technologies has also witnessed additional uptime of key equipment which is the result of the TPM training. The employees are now able to address factory floor issues as soon as possible via root cause analysis.

Quality has been improved which has added business from the 6 sigma training and our employees are working safer after receiving the safety refresher courses. The Skills4Jersey Training has put Shamrock in a wonderful position to build stronger customer relationships and will enhance Shamrock's reputation as a customer friendly, easy to do business with organization.

When completing the independently conducted post project survey for NIST, Shamrock reported:

- \$500,000 increased sales
- 5 New employees
- \$500,000 invested and cost saving in the development or introduction new products and Processes
- \$300,000 invested in plant equipment
- \$36,514 invested in workforce training and realized a savings of \$24,000 as a result of the Skills4Jersey Grant



When speaking specifically about how NJMEP assisted with the grant, Mr. Neuberg wrote, "The New Jersey Manufacturing Extension Program, Inc. walked us through the process of grant submittal. They assisted with the grant entry and helped with the gathering and completion of the pile of forms required by the NJ DOL. They managed the project very well and made sure that we completed all training and that all invoices were submitted.

WWW.SHAMROCKTECHNOLOGIES.COM



Contemporary Furniture Manufacturer Benefits from R&D Tax Credits

DESIRON, a celebrated contemporary home furnishings company in Kenilworth New Jersey was founded by Frank Carfaro who serves as President and Creative Director. A native East-Coaster, Carfaro is a third generation ironsmith whose family emigrated from Turino, Italy in 1921. Frank attributes his passion for craftsmanship and design to his grandfather who taught ironwork. He continued his studies at Rutgers College, University of Grenoble, La Sorbonne and L'Ecole des Beaux Arts. Although a student of the arts, Frank went to work on Wall Street. Instead of pursuing a long career there, he decided to marry his business savvy with his passion for design and artisanal craftsmanship. The result: in 1997 he founded DESIRON. One year following its debut, the company sold over \$1 million dollars of signature product. DESIRON is committed to producing Eco-Friendly, American-made home furnishings that elevate sophistication in any space.

In May of 2014 Mr. Carfaro called New Jersey Manufacturing Extension Program, Inc. (NJMEP) to hear more about its programs and services. An appointment was scheduled. NJMEP Account Manager Bob Salamone met with Mr. Carfaro to explain the programs and services and a follow-up meeting was scheduled to conduct a complimentary assessment.

Being a former Wall Streeter and financially savvy, Frank was particularly interested in learning more about the R & D Tax Credit that Bob explained and explore how DESIRON could benefit. Because new designs are critical to the company's success it is a perfect candidate for R&D Tax Credits.

R&D Tax Credit is a general business tax credit under Internal Revenue Code section 41 for companies that incur research and development (R&D) costs in the United States. It became a permanent tax credit that leaves businesses with more money to use for investments and hiring as part of the Protecting Americans from Tax Hikes Act (PATH) of 2015. Although many manufacturers are not aware of the Tax Credit, manufacturers in the United States perform more than three quarters of all private-sector R&D in the nation according to the Bureau of Economic Analysis, National Economic Accounts by Industry, 2013.

NJMEP brought in its R&D Tax Credit expert to talk with Frank. He explained the credit in detail and outlined what needed to happen for DESIRON to take advantage. His group would work closely with Desiron throughout the entire process.

First qualified research and development activities were identified. Upon completing the list of qualified activities, the financial group began its work to determine all qualifying expenses (wages, supply expenses, and contract expenses) attributable to the identified research efforts. Upon completion of the work, NJMEP supplied DESIRON the Financial Work papers in a preliminary form to use for filing DESIRON's Federal and State tax returns who reviewed the documentation. Once approved the final R&D Tax Credit Study was delivered. After working with NJMEP on R&D Tax Credits, DESIRON now was in the position to capture qualifying activities as they occurred, making it much easier to utilize the credit in subsequent years.

When completing the independent NIST Survey, Mr. Carfaro reported the impact of the project as:

- A cost saving of \$50,000
- An additional \$75,000 available to invest in new Processes & Practices

Mr. Carfaro is currently investing in his company and employees by working with NJMEP to implement Lean Manufacturing processes in its organization.

When asked about the experience and benefits of working with NJMEP and its resource, Mr. Carfaro explained, "As a manufacturer of contemporary furniture we invest a great deal of time designing new product, researching new materials and testing materials on designs. The Research & Development Qualified Research Analysis & Tax Credit Estimate that NJMEP provided identified many areas of our business that meet the requirements to qualify for these credits. As a result, we have improved cash flow and have been able to reinvest in the company and its employees." the gathering and completion of the pile of forms required by the NJ DOL. They managed the project very well and made sure that we completed all training and that all invoices were submitted. We look forward to a continued close relationship with the NJMEP on our future training needs."



WWW.DESIRON.COM/THE-FACTORY

UNEX

Innovative Manufacturer Uses R&D Tax Credits to Maximize its Investments

Award winning **UNEX** is an ISO-certified manufacturer committed to delivering quality picking products to its customers. The company's goal is to exceed customer expectations through continuous improvement, customer service and empowering their employees. In 1964, UNEX founder and engineer Frank Neuirth had an idea that would transform the distribution marketplace: a conveyor that could move materials along any line, straight or curved, with a single drive motor. With only 5 employees and a Fairfield, NJ, garage for an office, UNEX manufactured the first cable-driven live roller conveyor in 1964. The product offered significant cost savings over traditional belt-driven conveyors and launched UNEX as an order selection system provider. The company continually expands its offering through its strong commitment to research and development.



NJMEP's first work with UNEX was to help them better utilize its space to grow the company. The intent was to increase their product velocity, decrease lead times and increase sales by incorporating Lean Methodologies. Since then UNEX and NJMEP have worked closely together.

Just as it did in 1964, UNEX continues to develop transformative material handling equipment. The company invests heavily in developing new products to better serve its distribution, manufacturing and transportation clients. It is through this commitment the company has steadily grown, starting out in that first garage, moving multiple times to landing in Lakewood, NJ in 2015. This is also why UNEX remains the industry leader in innovative order picking solutions and has become known as "The Carton Flow Authority." UNEX's Pickologists* helped the company earn the prestigious SDCE100 Award from Supply & Demand Chain Executive Magazine.

*Pickologists: UNEX experts in the analysis, design and implementation of efficient and effective order picking processes

With all this innovation it made sense for UNEX to work with NJMEP to analyze its expenditures and processes to maximize its return on its investments by applying for the R & D tax credits. Working with the information compiled by NJMEP's Tax credit experts UNEX applied for R&D Tax Credits.



Pick Smarter. Pick Better. Pick UNEX.

As a result of utilizing the R & D tax credit in 2012 UNEX: When completing the independently conducted post project survey for NIST, Shamrock reported:

- Saw a savings of \$53,000
- Was able to invest \$20,000 in workforce development
- Hired 1 new employee
- Invested \$50,000 in new products and processes which included but was not limited to sponsoring an engineering internship to help with product development and purchasing a 3D printer

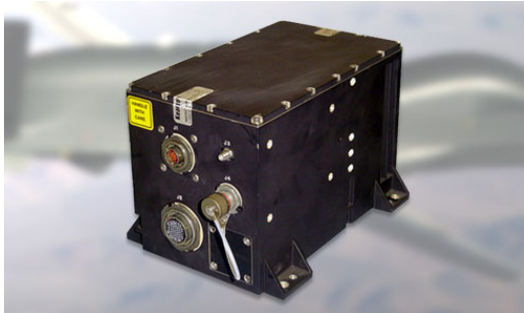
When asked about his experience, Howard McIlvaine, VP of Operations replied, "We have found the New Jersey Manufacturing Extension Program to be a helpful resource for our company. NJMEP continues to assist us in the preparation of the R & D Tax Credit Program, enabling our company to recover R & D tax credits. We value NJMEP and the assistance they provide to manufacturers in the state of New Jersey, and we look forward to working with NJMEP in the near future"

WWW.UNEX.COM

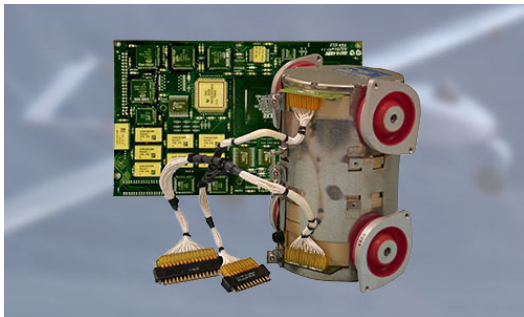


Manufacturer's Investment Generates Cost Savings and Increased Sales

Kearfott Corporation was founded in 1918 by William Dunham Kearfott. The Kearfott name has become synonymous with quality, reliability, and high technology on the cutting edge of science. Kearfott's products guide spacecraft and strategic missiles, navigate autonomously undersea, provide navigation and fire control for ground vehicles, and control motion aboard both military and commercial aircraft among numerous other applications.



An international company with over 500,000 square feet in New Jersey, North Carolina and Mexico, where over 100,000 inertial systems, and over 4 million precision components and actuators have been produced. In New Jersey, Kearfott products include a complete line of guidance, navigation and pointing systems using both ring laser and tuned rotor gyroscopes. New Jersey operations also include complete manufacturing, test and product support capability for all of Kearfott's inertial products and systems. In its North Carolina and Mexico operations, Kearfott designs, manufactures and supports gyro stabilized sights, electro-mechanical actuators, motion sensors and sensing systems, and electronic controllers.



Since 1988, Kearfott has been a wholly owned subsidiary of Astronautics Corporation of America (ACA) which is headquartered in Milwaukee, Wisconsin.

Like many companies, Kearfott outsourced the management of its website. And like most discover, the costs could be high and there was a time lag between a request and implementation. Rather than staying the course, Kearfott decided to bring management of the site in house.

Gregory Ryan, Director of Integrated Operations explained, "Kearfott has a long history of working with NJMEP on projects ranging from a Lean Transformation, SCAMPI C and had recently completed training

on Outlook. The training went very well resulting in maximizing our investment in the program. When we needed to improve the management our website that was built in WordPress we turned to NJMEP because of the previous successes we've had working with them."

NJMEP brought in a WordPress expert to train select personnel. With eight hours of training, participants learned:

- The difference between WordPress.com versus WordPress.org
- WordPress Themes
- Page management such as creating a Blog page to display posts, Creating generic pages – about us, contact us, and deleting pages.
- How to create a Custom Menu, place pages in order and add sub pages
- Manage the Blog
- Add Widgets
- Manage Media Requirements, Plugins and Content



As reported in the NIST Survey, Kearfott achieved the following benefits:

- \$500,000 increased sales
- \$250,000 cost savings
- \$50,000 investment in workforce training which included cost of the WordPress Specialist and the in house training costs.
- \$100,000 investment in New Process and/or Product

WWW.KEARFOTT.COM

Nadcap Certification Expands Manufacturer's Markets

Paramount Plating Co. Inc., which is now Paramount Metal Finishing Company Inc, was established in 1958 as a job shop in the Aerospace, Military, Industrial, Medical Component and Telecom Industries supply chain. The company finishes / coats parts for these industries. This privately held company is located in a 75,000 square ft facility in Linden NJ.

Most of Paramount's customers operate within a 175 Mile radius of the plant. They turn to the ISO 9001- 2008 certified company to meet their needs as the company is known for quality products, competitive pricing and excellent customer service. This reputation has brought about such projects as painting projectiles for the Abrams tank, coating connectors for the communication industry, and coating housings for the cable TV industry.

Like many companies, Paramount experiences periods of revenue peaks and valleys due to product trends and business cyclicalities. Paramount believes their business is driven by quality, service and providing innovative manufacturing process and capability. They have come up with innovative processes over the years that have separated them from the competition.

The key to the Company's profitable growth in the future is taking advantage of its quality culture. Paramount chose to do this by achieving the difficult to obtain NADCAP* certification. Acquiring this certification would expand Paramount's markets as the company would have the ability to quote projects that they have been previously barred from because they did not carry this certification.

Paramount contracted with New Jersey Manufacturing Extension Program, Inc. (NJMEP) to assist the company in achieving NADCAP certification. NJMEP began by explaining the requirements needed to achieve certification. NJMEP also explained that an NJ Department of Labor Skills4Jersey grant would help reduce costs for this process. As a small company Paramount agreed that applying for financial assistance would enable the certification training to move forward more quickly. NJMEP then laid out the training plan, assisted in the application and when approved brought in a qualified trainer to implement the training plan previously created. In addition NJMEP staff helped manage the grant administration to reduce the burden on Paramount.

NJMEP trained 20 Paramount employees on the Procedures and documentation requirements for NADCAP Certification by providing two courses:

- Quality Control Technology/Review of NADCAP Accreditation Requirements
- ISO Quality Systems/NADCAP Certification Training

Michael Fuschetti, President of Paramount explained, "The training helped us maintain our goal to continuously develop the competency and skills of all our employees so that they can be competent in their position and contribute to the goals of the organization. NADCAP certification has enabled Paramount to expand its market as it put Paramount in a select group of NADCAP certified metal finishers. We can now participate in tenders that are restricted to NADCAP certified only bidders for work outside the Aerospace Industry where NADCAP certification is a requirement of eligibility.

As a result of the Nadcap Certification Training, when surveyed by NIST, Paramount Metal Finishing Company Inc. reported:

- \$250,000 in new sales
- Investing \$40,000 in Workforce Training which was partially funded by a Skills4Jersey Grant that resulted in a \$30,000 cost savings.
- Hired 4 new employees

Mr. Fuschetti added, "Paramount was very satisfied with NJMEP and the instructor, who did a good job. He fit in well with the organization as he was able to assimilate easily and train in conjunction with the culture of our organization."

**PARAMOUNT METAL
FINISHING COMPANY**

WWW.PARAMOUNTMETALFINISHING.COM



Supervisory and FSMA Training Keeps Food Manufacturer a Leader in the Industry

Tropical Cheese began as the dream of Rafael Mendez. Born in Las Villas, Cuba, Mr. Mendez came to the US at seventeen with \$50 and a dream. Armed with experience from working in his father's cafeteria, he gravitated to the food industry. He began by making deliveries, then establishing a small milk route and finally starting Tropical Cheese in Perth Amboy NJ. Thirty plus years later this family owned business remains the favorite cheese of many Hispanic households because of the company's attention to detail and authenticity. Tropical Cheese, which operates in a state of the art manufacturing facility with 250 employees, is ISO and HACCP certified, uses the finest natural ingredients and employs award-winning cheese makers from around the world in its 67,000 sq ft facility.

The FDA Food Safety Modernization Act (FSMA) is the most sweeping reform of the food safety laws in more than 70 years. It was signed into law on January 4, 2011 with its objective being to ensure the U.S. food supply is safe by shifting the focus from responding to contamination to preventing it. Food manufacturers have been working diligently to implement the law's requirement to ensure they are in compliance with the new regulations. As part of Tropical Cheese's continuous improvement plan the company brought in its trusted process improvement partner New Jersey Manufacturing Extension Program, Inc. (NJMEP) to assist them in putting in place the new requirements.

NJMEP began the process by conducting an assessment of Tropical Cheese. The assessment identified the lack of communication between departments. This resulted in each department not being aware of the other's tasks creating inefficiencies because each team's role directly impacts the efficiency of another department. With these findings NJMEP recommended that Tropical Cheese implement Supervisory Skills training that would work in conjunction with the FSMA related training that Tropical Cheese was planning.

Tropical Cheese and NJMEP worked closely to create a training plan that would not interfere with the demanding production requirements and be cost effective for the company. NJMEP and its resource, Juan Ortiz, built and conducted a Supervisory Skills training program that covered Basics of Management, Leadership Skills and Managing Change & Performance.

Knowing the FSMA would be impacting many food manufacturers such as Tropical Cheese, NJMEP brought together companies for an Industry Specific Consortium Grant. Tropical Cheese and eighteen other NJ Food Manufacturers were trained in critical FSMA requirements. Consortium grants make it possible for companies who would not be able to meet direct grant requirements, for example 10 participants in a class, to benefit from the DOL programs.

Four Tropical Cheese employees attended classes in Food Allergens, Internal Auditing and Corrective Action and Root Cause Analysis and SQF Practitioner training.

As a result of the Supervisory training the divide between departments and unwillingness to cooperate with one another improved. Employees became aware of how one person's tasks directly impacts the outcome of another individual's tasks. These changes greatly improved the work environment. Required certifications were a result of the training provided by the FSMA Consortium Grant.

Joseph Vicini, VP Manufacturing for Tropical Cheese talked about his work with NJMEP. "We have been working with NJMEP for many years now. They are well known in the manufacturing industry and possess the experience and outside perspective to assist with any business needs we might have. For example, what the assessment uncovered helped us identify our specific personnel training needs. Also they look out for us in ways that helps us contain costs, such as the grant, and achieve certifications that keep us FSMA compliant."

When responding to the NIST Survey Mr. Vincini reported that the training in addition to the operational impact financially impacted Tropical Cheese positively in a number of areas:

- A \$24,000.00 Cost Savings
- Sales Increase of \$58,000
- Retained \$19,000,000 in sales that could have been lost without the certifications that resulted from the FSMA training.



WWW.TROPICALCHEESE.COM

SHREE JI PRINTING COMPANY

ISO Certification Opens Doors to New Markets

Shree-Ji Printing (SJ Printing) was founded in 1994 as a one-press one man start-up. Today the company is a full service custom label manufacturer, operating six UV flexo presses and associated equipment in 25,000 square feet of commercial space in Carlstadt, N.J. The company is a family owned non-union shop with 30 employees. SJ Printing attributes its success to the exceptional service they provide and the high-quality labels the company produces at budget-friendly prices.

Ankit Patel, President of SJ Printing, wanted to expand the business, however, many of the company's targeted markets required certifications that the company did not have. Mr. Patel's main goal was to achieve ISO 9001:2008 certification. He felt the certification was imperative for expanding its markets and gaining a competitive edge. Now that Mr. Patel knew what he wanted to do, the hunt for assistance with the certification process came next.

"Our vetting process involved numerous searches on the Internet and reading excellent reviews about New Jersey Manufacturing Extension Program, Inc. (NJMEP) and its services. We were also struck by their mission and proven track record of success with other manufacturers. After meeting with NJMEP's staff, we were impressed with their level of knowledge and expertise," explained Mr. Patel.

NJMEP began its work with Mr. Patel by conducting its no cost business assessment to obtain an understanding of the company's operations and needs. In conducting the assessment NJMEP realized SJ Printing would benefit from assistance in financing the preparation for ISO certification as it is quite costly for a small manufacturer. The company was an excellent candidate for a New Jersey Department of Labor Skills4Jersey grant. A training plan was developed, an application was completed and upon approval, SJ Printing began its ISO certification journey.

All thirty company employees took part in the ISO Quality Systems Training, 110 hours of classes that provided training in the following areas; 1. Understanding ISO 9001:2008 philosophy, recognition of the resource requirements for implementing ISO effectively, and an opportunity to discuss and agree to the fundamental benefits you want to achieve, 2. Developing and Documenting a Quality Policy & Objectives, 3. Process Review and Process Leader Training, 4. Document Control, 5. Quality Manual Development, 6. Procedure Development, 7. Employee Development and Involvement, 8. Internal Auditing and 9. Management Review.

SJ Printing achieved its ISO 9001:2008 certification. Its policies and procedures are now well documented making it easier to meet Shree-Ji's goals and objectives. The company also achieved organizational improvements:

- An efficient management process
- Greater Employee accountability for their responsibilities
- Certification communicates a positive message to staff and customers
- The ability to identify and eliminate waste is now in place
- Costs have been reduced
- A culture of continuous improvement has developed
- Reinforced their commitment to quality
- Marketing opportunities



When responding to the NIST Survey Mr. Patel reported the following financial impact as a result of the work with NJMEP on the ISO certification project:

- Increased sales \$750,000
- Cost savings of over \$20,000 as a result of the Skills4Jersey Grant.
- Invested \$30,000.00 in new products and processes

When asked about his work with NJMEP Mr. Patel replied, "NJMEP helped us reach our organizational goals and objectives. We have acquired business of a multi-national pharmaceutical company as a direct result of ISO certification, improved training of employee's that resulted in better efficiency and cost savings and our management has a better understanding of core business goals. We are very pleased with what we achieved as a result of our work with them."

WWW.SJPRINTING.COM

Garden State Precast Expands Reach

Garden State Precast, Inc. purchased Duncan Thecker Precast, on November 3, 1999; The new ownership bringing approximately 100 years of experience in the precast concrete industry.

The Garden State Precast facility is located in Farmingdale, NJ and supplies utility contractors in the state of New Jersey with manholes, lift stations, catch basins, utility vaults, electrical junction boxes, box culverts, headwalls, water control structures and water filtration ECPO systems for NJDOT, municipal, commercial and private development. Duncan Thecker/Garden State Precast has been successfully serving this market for the past thirty-seven years.

Garden State Precast's goal is to continually improve the quality of all aspects of its business and gain respect from its customers and vendors alike. Engaging with many of NJMEP's resources, Garden State Precast was driven to improve their reach, client connections, and overall efficiency.

Several courses were outlined to coincide with Garden State Precast's goals. Working closely with NJMEP, a curriculum of improvement was outlined for the upcoming year.

That curriculum included: training in addition to the operational impact financially impacted Tropical Cheese positively in a number of areas:

- Principles of Lean Manufacturing
- Value Stream Mapping
- 5S System: Workplace Organization
- Pull/Kanban Systems
- Cellular/Flow Manufacturing
- Total Productive Maintenance
- Poka Yoke (Error Proofing)
- Set-up Reduction
- Project Management and Implementation of Lean Manufacturing

The resultant improvements were a direct response to Garden State Precast's adoption of key elements inherent in each course.

- Increased Sales: \$750,000.00
- Retained Sales: \$2,500,000.00
- Cost Savings: \$180,000.00
- Workforce Practices savings: \$50,000.00

In addition to manufacturing process improvements, Garden State Precast was eager to implement Human Resource improvements to sustain the changes for a long-lasting, positive growth.

When asked about the experience of working with NJMEP, John Kirby O'Malley, President of Garden State Precast said "As a manufacturer, you're constantly looking to improve productivity." John continued, "Working with NJMEP over the last seven years has enabled us to do just that, and will continue to do so."



THE R&D Tax Credit – A Game Changer for FIDELITY Industries

FIDELITY Industries is a leading independent U.S. manufacturer of vinyl wall coverings for use in offices, hotels and health care facilities throughout the world. The company was founded over 40 years ago as a small manufacturer of basic vinyl wall covering. Today, FIDELITY Industries manufactures numerous brands of wall covering in over 350,000 feet of production and warehousing space covering the widest scope of specification, design and color available. All products meet or exceed specifications for Type I and II class A, B, C & D wall coverings when tested in accordance with ASTM E 84 standards and all have a CE Declaration of conformity.

FIDELITY has taken a leadership role in producing environmentally friendly products. A decision was made over twenty years ago to eliminate all solvents, ozone depleting chemicals and heavy metals from their production processes. Today they not only follow those procedures but they also produce exclusively on low VOC emitting vinyl and use backing of recycled product whenever possible. Over 90% of their production waste is now recycled into alternate product use eliminating it being dumped in landfills.

FIDELITY Industries, like many other manufacturers, is trying to maintain its competitiveness in the market place. Their success is dependent on its commitment to research and development, and they wanted to obtain maximum benefits from the available tax credits for its increasing research activities, design and work, and modification of processes.

The relationship between FIDELITY and NJMEP goes back to 2011, where they have taken advantage of the tax credits previously. A business assessment was conducted by NJMEP, which uncovered the fact that FIDELITY would once again be an ideal candidate for a R&D Tax Credit renewal.

NJMEP worked closely with FIDELITY to perform an in-depth study; and reviewed the guidelines with the client to ensure they understood that they must pass all four qualifying criteria:

- The goal has to be to discover some technological information that does not already exist within the organization.
- There must be a level of technical uncertainty related to the product or process development.
- Any qualified event must have a process of experimentation to prove or disprove a technical theory.
- The research must have goals attributable to function, efficiency, capacity, or other performance criteria.

The preliminary information and the eligible R&D costs were reviewed by NJMEP. These costs, combined with information relating to gross revenue and other information allowed NJMEP to provide FIDELITY an approximation of the Federal R&D credits it would receive.

NJMEP prepared the technical support documentation for FIDELITY's filing of the R&D tax credit by writing technical project reports for the tax year. The objective of the reports is to demonstrate that the activities are indeed "R&D" within the meaning of the credit and its guidelines. The report highlighted not only the successful outcomes, but also the doubts, difficulties, unsuccessful experiments that marked the course of development efforts.

FIDELITY secured—and sustained under IRS exam, federal R&D tax credits. The credits received have enabled FIDELITY to reinvest in their company through a talented workforce, resulting in increased sales. They benefited greatly from NJMEP's help in many ways:

- Increased sales: \$1,000,000
- Retained Sales: \$10,000,000
- Cost Savings: \$40,000
- New Employees: 3
- Employees Retained: 40



"We view the R&D tax credit as a necessary source of funding for the further growth and development of our company, helping to ensure our long-term prosperity. NJMEP helped us better understand our company's eligibility, the advantages of R&D and a long-term strategy to maximize the credits." Shmuel Brook, Vice President FIDELITY Industries.

WWW.FIDELITYWALL.COM/COMPANY.ASP



Knickerbocker Machine Shop Launches into New Markets

Knickerbocker Machine Shop Inc. has been in continuous operation since 1943. Starting as machine designers and welders in a 3-car garage in Paterson, New Jersey, the Company soon focused on producing the ASP Brand of austenitic stainless steel, duplex and high alloy pipe fittings, plugs and unions in 1944. The ASP Brand, marketed by Alloy Stainless Products Company Inc. became well known and internationally sold through PVF distributors for use in the chemical, pharmaceutical, petro-chemical, power & energy, shipbuilding, and nuclear power industries.

Knickerbocker Machine Shop needed to improve its competitiveness and productivity. They had issues being able to expand their business and reach new prospects or new markets, and needed a way to engage with the community and business collaborators. It was imperative that the company develop new, sustainable revenue streams to remain viable.



Knickerbocker Machine Shop reached out to NJMEP for assistance and NJMEP met with Knickerbocker's senior staff to complete an on-site assessment with a plan to identify and clarify the organization's sales and marketing strategies. The project focused on a needs analysis, and conducted a strengths, weaknesses, opportunities and threats (SWOT) analysis. Through a structured process, NJMEP helped Knickerbocker identify and characterize the markets, trends, value chains, and website enhancements.

NJMEP initiated a program that consisted of individual training modules: Destination Innovation, Establishment of Growth Opportunity Criteria & Project Goal Setting, Sales & Marketing Outreach Planning, and Monthly Market Scouting & Business Development Support.

The training produced:

- An expansion of Knickerbocker's ability to reach new prospects and/or new markets through a carefully planned and professionally executed growth strategy.
- Distinct criteria that will define, weigh and go on to set a hierarchy of the organization's efforts as related to top line growth.
- Expert facilitation and project support that will instill a Plan, Do, Check and Act inspired system to drive market diversification efforts.
- A structured process for identifying market needs and opportunities, while building a strategy and tactics to pursue carefully vetted market opportunities.

After completing the training, Knickerbocker created new marketing messages and established a marketing strategy. The company is in a more sustainable position now that it has a formalized marketing plan and website in place. Knickerbocker Machine Shop benefited from NJMEP's help in many ways:

- Retained Sales: \$4,500,000
- Cost Savings: \$50,000
- Savings on Investments: \$50,000
- Workforce Practices: \$50,000
- New Sales: \$150,000



Annemarie Appleton, President of Knickerbocker Machine Shop said, "Because of our engagement with NJMEP, we now have a better appreciation of our current marketplace, potential markets, how our current and future products fit into these markets, and how we might approach increasing sales. The services, marketing, and professionalism associated with the partnership have been outstanding."

WWW.ALLOYSTAINLESS.COM

Value Stream Mapping Helps Manufacturer Prepare for Move to New Facility

Connector Products Inc. (CPI) designs, develops and manufactures innovative, high-quality products for power utilities and mass transit. Specializing in connectors, CPI offers outstanding customer service and short lead times, especially during emergencies. "Better Products by Design" is the company's mission and a philosophy they live by as a trusted industry supplier. The family owned company was started in 1972 by Mario Polidori. Mr. Polidori began his career as a machinist at the age of 18 in 1941. He enjoyed a successful engineering career working for Aircraft Marine Products (AMP), where he designed and patented the first wedge pressure connector for utility applications.

It was not until the construction of the Washington Area Metro Transportation Authority subway system that Mr. Polidori saw the need for a unique rail connector. When his company did not see the value in it, he decided to leave and start his own business. Known today as the "Polidori Clamp," his original design for the rail connector is still widely used nearly 40 years later. Located in Pennsauken, NJ, CPI employs over twenty workers and has sales of approximately four million dollars. CPI acquired a new 20,900 sq. ft. facility and wanted to optimize this space while streamlining their process to "clean house" before the move. The company contacted NJMEP with regards to submitting a proposal to assist with this project and in streamlining their processes.

NJMEP met with representatives from CPI, received an overview of the manufacturing operations and heard the challenges faced in moving the operation to the new facility. Based on this initial meeting, NJMEP and its resource, provided a proposal for developing a layout for the new facility using the Lean manufacturing tool Value Stream Mapping (VSM). VSM is a dock to dock analysis of the procedures and processes used in a company's operation. It begins with the customer order and demand, the order entry process, the fabrication and assembly processes, and product flow (push vs. pull) from raw material through to packaging and shipment.

The objective is to identify bottlenecks that hamper efficiency and identify improvements that will reduce material handling, improve material flow, reduce inventory, and reduce lead time. Improvements discovered as a result of the VSM would then be incorporated into the new facility layout. First, the team constructed the current state Value Stream Map and captured the metrics and key indicators of the current process. Next they applied lean principles, including the 8 wastes to develop a future state Value Stream Map. The Map showed recommended process improvements to reduce waste and lead-time. Using the information gleaned from the mapping, preliminary layouts were developed.

New equipment, work areas, and workflows were considered in preparation. CPI's personnel reviewed the preliminary layouts and made suggestions and recommendations that were incorporated into the layouts. In addition to VSM, CPI participated in a 4 hour Principles of Lean Manufacturing with Live Simulation workshop that they hosted for other South Jersey manufacturers.

As a result of the NJMEP VSM and the workshop, CPI was able to meet their objective of optimizing their processes by "cleaning house" before the move. The VSM project enabled them to streamline their processes and the workshop helped them identify other Lean techniques that would also help them. When completing the NIST Survey on the benefits of these endeavors, Mr. Polidori reported:

- Increased sales: \$10,000
- New employees: 3
- Realized a cost savings: \$50,000.00
- Invested in plant equipment: \$10,000
- Saw a saving as a result of new processes: \$10,000



Nick Polidori, the president of CPI explained, "Our R & D Tax Credit work with NJMEP has been very beneficial for us so when I was preparing for our move they were who I reached out to. The move went smoothly and we are settled into the new space." He added, "The VSM project provided us with a detailed process flow that we used for layout changes for our relocation, and we still refer to this flow chart today. It helped us to better visualize areas of waste, especially in excess product and people movement. As a result of this project-our relocation was more successful-and we continue to look for ways to reduce waste throughout our new shop."

WWW.CONNECTORPRODUCTS.COM



Textile Manufacturer Counters Foreign Competition through ISO Certification

Absecon Mills has been a supplier of fabric for the public seating industry for 35 years. A number of years ago the company started a technical textiles division to supply fabric to the Ballistic and Composite industries. The family owned company has 70 employees with 58 of them located in the Cologne New Jersey facility and the additional employees being in the field.

Absecon's business was negatively impacted by the opening of trade barriers, and the dropping of tariffs and duties with China. The company's strategy to combat foreign competition was to expand into the US military markets as products supplied to them must be Berry amendment compliant, i.e., produced within the United States.

Quality, repeatability and traceability are critical when doing business in these markets. Virtually all of the customers Absecon would be supplying are ISO certified and require ISO certification of their primary and subcontractors. To compete in this market, Absecon Mills would need to achieve ISO 9001 certification. In addition to this new market, Absecon's core contract upholstery business was expanding into the Class 8 Truck Seating Market. In order to be a Tier II Supplier to that market, ISO certification was required. In addition, the certification would open doors to:

- Body armor for law enforcement through Safariland and Point Blank, the two largest Body Armor Manufacturers who control over 60% of the domestic ballistic vest market
- Ballistic Defense contracts for the SPS (Soldier Protection System) comprised of ballistic vest torso protection, extremity protection, and load bearing harnesses
- Sell fabric to Composite One and North American Composites, the two largest composite products distributors in the US

*The Berry Amendment (USC, Title 10, 2533b, Section 832 of Public Law 107-107), requires the Department of Defense to give preference in procurement to domestically produced and manufactured, clothing, fabrics, tents and any item of individual equipment made from fabrics.

Having a long history of working with New Jersey Manufacturing Extension Program, Inc. (NJMEP), Absecon Mills turned to them again in order to become certified. Becoming certified is costly. So for a relatively small company it would be a challenge. NJMEP and its Resource, Prism International, a company with extensive experience in ISO certification, worked closely with Absecon to create a plan for implementing ISO 9100 and achieving registration. Assisted by NJMEP, Absecon applied for a New Jersey Department of Labor Skills4Jersey Training Grant to help defer the cost. The grant was awarded and over a twelve-month period fifty-eight employees were trained in the skills and processes necessary to achieve ISO certification, key components of which are documentation to provide definition and structure for the management system and implementing a document control system.

Absecon Mills, as a result on its work with NJMEP and its resource, is now an ISO 9100 registered company and able to do business with companies formerly out of their wheelhouse. As reported by in the independently conducted NIST survey 6-12 months upon completion of the project, Absecon Mills:

- Increased sales by \$2.2 million
- Achieved a cost saving of \$200,000 with a saving in workforce training of \$22,000 as a result of the NJDOL grant
- Invested \$31,090.00 in workforce training as part of the grant requirement
- Invested \$588,000 in New Products and Processes
- Hired 14 new employees and retained 15 who were at risk

abSECON

When David Adair, Executive Vice President of Absecon Mills Inc. completed the required grant closeout report he stated, "We were very satisfied with both NJMEP and the instructor provided. Both provided us with great service and accommodated our training needs and schedule. I would recommend both!" In addition, he recently explained, "Absecon Mills is like the Phoenix. In 2011 we sustained a devastating fire. Since then, with the help of NJMEP and our dedicated employees we have come back... investing in the business and expanding our markets to position the company for continued growth."

WWW.ABSECONMILLS.COM

CROWN ROLL LEAF, INC.

ISO Certification Secures and Expands Manufacturer's Customer Base

Paterson, New Jersey, **Crown Roll Leaf, Inc.** produces over 60 million linear feet of finished foil products each month and ships them 7 days a week from its 150,000 sq. ft. headquarters. The company's unique products defeat forgers with its breakthrough advances in multi-level ID security technology. The Crown Roll Leaf's quality assurance programs have built a reputation for consistent, reliable decorative materials, security devices and value-added products. The company which has a customer base from 50 countries employs over 200 people in what is the largest foil manufacturing facility in the United States.



Many of Crown Roll Leaf, Inc. customers were asking the company to become ISO 9001* certified. Without certification, management anticipated a decline in sales which would result in reducing its workforce. Having an ISO 9001 system in place would provide its customers with the assurance that its products meet the highest standards. Faced with this challenge Butch Florentino, Quality Control Manager of Crown Roll Leaf, contacted New Jersey Manufacturing Extension Program, Inc. (NJMEP) through its website to schedule an appointment regarding ISO certification service.

NJMEP met with the company to discuss Crown Roll Leaf's needs then prepared a plan to train 10 employees in ISO Quality System/ ISO 9001 and 30 employees in understanding the system. These employees would be responsible for implementing and overseeing the company's quality system throughout the organization. To help reduce training costs, NJMEP recommended applying for a Skills4Jersey grant as the company met the criteria for qualifying.

With NJMEP assistance, Crown Roll Leaf completed the grant application and submitted it. Once notification the award was received, training began. One year later at the close of the grant, NJMEP and Crown Roll Leaf began phase two of the implementation process.

Crown Roll Leaf is able to ensure its customers that its manufacturing practices meet their quality requirements and is now able to go after new business that had not been available to them because of lack of certification. The ISO 9001 training helped Crown Roll Leaf put in place the proper procedures so each employee has a detailed understanding of the way the company manufactures and operates. In addition, Crown Roll Leaf, Inc.:

- Developed a quality manual for long term success
- Retained employees that could have been let go
- Hired 18 new employees at the close of the training grant

When completing the third party NIST survey at the close of the two ISO projects, Crown Roll Leaf reported:

- Increased Sales of \$500,000
- Achieving an overall cost savings of \$130,000
- Invested \$46,601 in training
- Saved \$22,000 in training costs as a result of the Skills4Jersey investment in the company
- Matched \$24,600 in as part of the Skills for Jersey grant requirements

When completing the NJDOL grant close-out report, Crown Roll Leaf's Gene Schnaidt reported, "We were extremely pleased with NJMEP and the service we received during the ISO training. We found their expertise to be invaluable during the challenging ISO certification."



Crown Roll Leaf, Inc.[®]

WWW.CROWNROLLLEAF.COM



New Processes and Procedures Improve Packaging Manufacturer's Competitiveness

Sabert Corporation is a global leader and innovator in the food packaging industry. Since 1983, Sabert has been designing, manufacturing and distributing quality, cost-effective solutions for packaging, displaying, serving and storing fine food. The company, which is headquartered in Sayreville, New Jersey, employs 248 people. Sabert also has North American facilities in California and Kentucky, as well as manufacturing facilities in Belgium, Europe and Zhongshan, China.

Sabert's founder, Albert Salama founded the company when he was 32 years old. Based on a vision he had, that lifestyles would eventually drive food choices just as much as taste and against the advice of friends and colleagues, he resigned from a position as vice president of a major global bank and began selling plastic food trays out of his apartment. He launched the company with his own modest savings and no investors, and it is now an industry frontrunner serving many businesses, from small independent caterers to multinational clients. The company's original mission, to enhance and advance the way people enjoy food, continues to guide the company's success today.

Over the past decade, Sabert's annual sales revenue has grown significantly, with a compound annual growth rate of 16 percent. Along the way, Salama built new headquarters in Sayreville, and added or expanded facilities in Kentucky, California, Belgium and China. Today, Sabert is one of the largest providers of short-life food containers, and unlike its peers, almost all of its growth has been organic. Mr. Salama's vision was on target and twenty-four years later, he received the Ernst and Young Entrepreneur of the Year™ 2014 Award. Sabert has never rested on its laurels. In 2002 Albert Salama and two others from the company participated in a Lean Manufacturing workshop and followed up with New Jersey Manufacturing Extension Program, Inc. (NJMEP) on a Product Development project.

When Sabert wanted to improve production efficiency, they met with NJMEP. The company felt that the skills of their current workers needed improvement as well as communication between workers and management. Low productivity as a result of inefficiencies was also a problem. Long changeovers of almost 2 hours negatively impacted production. Although Sabert had a number of internal experts experienced in Lean, and a QA person with a black belt in Six Sigma the company wanted to work with NJMEP to design and implement a training plan for its workforce.

After assessing the needs of the client, a plan to introduce Lean Manufacturing to Sabert was proposed and accepted. In addition to the Lean implementation plan, NJMEP identified the company as an excellent candidate for a New Jersey Department of Labor Customized Training Grant. Assisting in both the application and administration of the grant, NJMEP was able to make the implementation of Lean a simple and cost effective process. When asked about the grant process, Gregg Salvino, Director EHS, responded, "NJMEP assisted Sabert from start to finish with every NJ DOL requirement on this grant. They made the initial application submittal process very simple which we knew without their help would have been a nightmare."

Over a course of one-year, Sabert and NJMEP educated 107 employees in the principles and tools necessary for transitioning to a Lean organization. Upon completion of the training the company's employees were able to improve productivity by becoming more efficient in their practices i.e. changeover times were reduced and organizing the workplace based on 5S saved time and steps. In addition, communication throughout the organization improved as a result of the Team Building work.

When surveyed by an independent group 6-12 months after completion of the project on the impact the program had on its company, Sabert reported they:

- Achieved 2% in cost savings
- Increased sales by 9.3%
- Hired 10 new employees
- Invested \$75,000 in workforce development and \$500,000 in new processes and products
- Saved \$ 73,600 in training cost as a direct result of the NJDOL investment in the company



Gregg Salvino, Director EHS, Sabert Corp., spoke of his work with NJMEP, "NJMEP showed competence and experience in regard to the Lean Initiative in which they helped us implement. They demonstrated to us why they are considered one of the best Lean Implementation Experts in New Jersey. The project helped us identify wasted efforts and help us reduced costs in our manufacturing operations. We intend to utilize NJMEP on additional training and cost savings projects in the future."

WWW.SABERT.COM

Typical Day To Day Processes Qualify For R&D Tax Credits

Tri-Power Design LLC, a ISO 13485 and 9001 certified engineering and manufacturing company, are problem solvers. The company applies the latest technologies to take a customer's idea from concept to product. They've taken ideas from the napkin sketch to the surgeon's hands and from a foam model to the store shelf, designed and built custom automation machines and factory robots that package/ build assemblies from a multitude of parts, in seconds. With over 20 years of solving multidisciplinary engineering challenges in a think-tank environment, Tri-Power Design takes complex engineering challenges and turns them into solutions for medical, pharmaceutical, aerospace, consumer product and manufacturing industries. Whether it is surgical instruments, critical bench top test equipment, test fixtures, or hi-speed transfer and assembly systems, companies see a high ROI with Tri-Power.



Over the last decade, Tri-Power's in-house manufacturing capability, located in its 8500 sq. ft. advanced manufacturing and prototyping facility, has grown to a level not usually seen in design firms.

Like every small company, cash flow can be an issue. When looking for ways to improve the situation Tri-Power Design turned to New Jersey Manufacturing Extension Program, Inc. (NJMEP). The company had worked with NJMEP on numerous projects from ISO 9001:2008 (ISO 13485-Medical) certification to Energy Procurement. In response to a conversation with Tri-Power, NJMEP introduced the company to R & D tax credits. Since 2012 NJMEP and its tax credit specialist have been working with Anthony La Rosa, Principal and Managing Partner at Tri-Power on improving cash flow through R & D Tax Credits. Most manufacturers are not aware that many of their typical day to day processes qualify as research expenditures.

NJMEP assisted Tri-Power Design in preparing documentation to support the Federal R & D Tax credit filing by:

- Identifying Qualified Research and Development Activities
- Determine all qualifying expenses (wages, supply expenses, and contract expenses) attributable to the identified research efforts. This was done by collecting various types of contemporaneous documentation, including W2s, vendor invoices, etc. that will be used to calculate final figures relating to the IRS and State tax credits.
- Assemble Technical Supporting Documentation
- Delivery of the Final R&D Tax Credit Study
- Provide 4 hours of support in the event that the tax credit claim and/or supporting documentation is subjected to questions, review or audit by either the IRS or the State authorities.

R & D Tax credits, in one year alone, allowed Tri-Power Design to:

- Reinvest money for long term growth
- Achieve a tax credit value of over \$30,000
- Achieved a cash value saving of over \$20,000

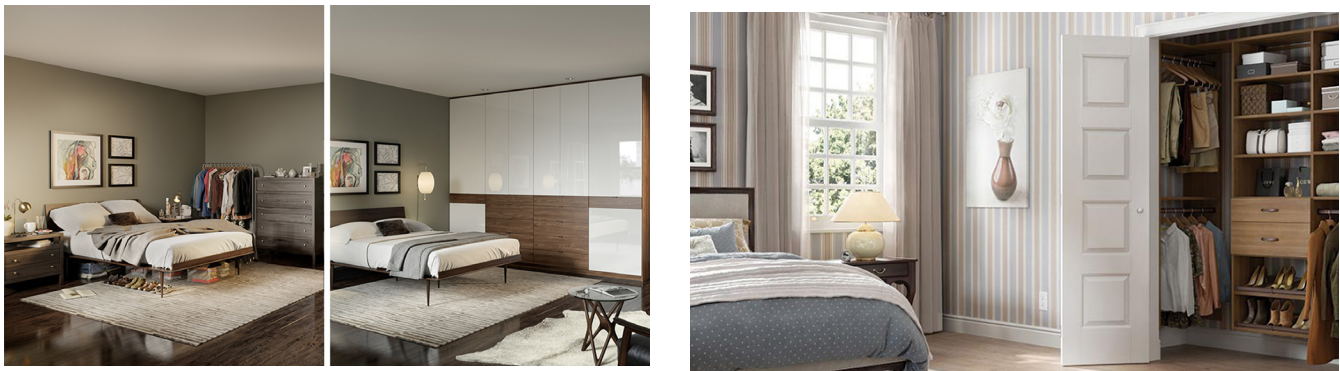
Mr. La Rosa commented, "The R & D tax credits were very helpful in reducing our tax burden which left more dollars in the company and indirectly allowed for spend in other areas. I continue to work with NJMEP on tax credits as well as other projects as needed. They are currently working on a Cost Segregation Study for us as I have been very pleased with their work."



WWW.TRIPOWERDESIGN.COM

Commitment To Continuous Improvement Results In Major Process Improvements

California Closets is a national franchise that pioneered custom storage solutions in 1978. Marty and Ruthie Ginsberg first opened California Closets doors in Fairfield, New Jersey 28 years ago. The Ginsberg's motto since day one has been, provide North Jersey residents with the quality materials, beautiful craftsmanship and impeccable customer service California Closets is famous for across America. Their deep understanding of the particular storage challenges in North Jersey homes helped them build a highly successful company.



Manufacturing locally has many benefits it also has many challenges when running a manufacturing facility as well as a top-notch design and problem-solving company. No project is too large, small or unconventional, so having efficient manufacturing processes is key to remaining profitable. Mr. Ginsberg needed assurance that his production floor was just that.

Over the years, Marty worked closely with New Jersey Manufacturing Extension Program, Inc. (NJMEP) to transform his shop by implementing Lean Manufacturing. Lean is a journey, not one stop and you're done. Now it was time to take another step, the introduction of Lean to Middle and Upper management. Naturally, he turned to NJMEP. NJMEP laid out a plan including the Introduction of Upper and Middle management to Continuous Improvement/Lean concepts via access to E based Lean Focused Manufacturing Software provided by Radical Transformation LLC.

To begin the process, the team physically value stream mapped the order to cash process from inception to loading the vans and trucks. This included a current state value stream map and a future state value stream map with ongoing refinements discovered through Kaizen events. The goal – eliminate any bottlenecks found in the system in order to accommodate a 1.5 times increase in sales in the same footprint currently in use.

Specific attention was made towards developing the mindset and lean culture of the three identified members of the operations management team to think and act Lean. The strategy for this segment California Closets Lean Journey included:

- Increase cycles at the saw
- Increase Meters of banding
- Improve Defect Management
- Reduce payroll to revenue ratio to less than 4%
- Implement parts Kanban systems
- Reduce scrap material at both the pole cutting stations and saws
- Improve first-time pass rates.
- Develop root cause analysis skill with the management team



CALIFORNIA CLOSETS®

WWW.CALIFORNIACLOSETS.COM

Certification and Process Improvement Improves Manufacturer's Competitiveness

Established in 1987, **Howman Engineering** is a U.S. designer and manufacturer of electronic and electromechanical controls. A full-service supplier, Howman Engineering produces what they design. Howman Engineering's in-house engineering and management staff works closely with its customers to develop custom electronic and electromechanical control products. The company's capabilities include extensive expertise in Design for Manufacturability (DFM) and Design for Testing (DFT) procedures.

Howman's control panels and other electromechanical controls are assembled in its Lebanon, New Jersey facility. The company's extensive business partnerships with local and regional contract manufacturers and top distributors of quality electronic and other critical components allows Howman to stay competitive and manufacture in the United States. It also helped the company maintain customer production schedules and deliveries throughout the turmoil of the 2004 and 2011 Pacific tsunamis and Superstorm Sandy in October 2012. Its customers recognize the importance of Howman Engineering's exceptional on-time delivery record and its zero-defect policy through 100% product testing.

In spite of its success, Howman needed to improve its production processes and train their employees in best practices to keep its costs in-line. Most of the company's workers had not worked at other facilities or been exposed to other production techniques. To meet its objectives, Howman would need to expose them to improved working methods to gain a competitive edge to win contracts and sales.

Mitchell Ouverson, Purchasing/Technician of Howman, was referred to New Jersey Manufacturing Extension Program, Inc. (NJMEP) by DVIRC, a Pennsylvania member of the NIST MEP network. NJMEP's Account Manager met with Mr. Ouverson to determine how best to meet his needs. To do this, a Lean Opportunity Assessment was conducted. The results confirmed implementing lean production methodologies would produce the results needed. During discussion, it was also determined that employees needed to receive training on soldering techniques.

Howman recently made a number of capital investments making cost containment an important requirement in putting a training program in place. With the help of NJMEP, they applied for a New Jersey Department of Labor Skills4Jersey training grant. The grant would enable Howman to move the training along on at a much faster pace than would otherwise have been possible. Approval of the grant enabled NJMEP to conduct training in two Lean tools Value Stream Mapping and 5S and IPC Training and Certification. Value Stream Map training would give employees the ability to analyze any process within the company and determine how to improve it. 5S is the name of a workplace organizational method based on five Japanese words: seiri, seiton, seiso, seiketsu and shitsuke. The objective of 5S is to organize workspace for efficiency and effectiveness. Both tools are integral elements for implementing Lean manufacturing. IPC Training would improve soldering skills.

Howman's Training program resulted in a number of benefits:

- Lean training improved productivity and costs were reduced by about 10%.
- On time delivery is close to 100%.
- Soldering expertise improved. Solderers were now able to solder 10-15% faster with fewer defects.
- In addition, there was a positive impact to its HR plan as Howman has grown its employees' expertise.

When completing the grant close-out report Mr. Ouverson wrote, "The training enabled our company to drive down the costs and inefficiencies in our process allowing us to remain competitive in price and delivery times by introducing alternative methods of production which opened our eyes to other ways to improve our processes. Our customers are very satisfied with our performance." He also added, "We are planning on continuing the lean training and possibly some supervisory training as well for some of our employees and we will work with NJMEP again as we are very satisfied with the support that they have provided us."

When completing the 3rd party survey conducted by NIST 6-9 months after the completion of the project Mr. Ouverson reported:

- Increased Sales of \$50,000
- Invested \$10,000 in new products and processes
- Achieved an overall cost savings of \$20,000 which includes saving in training costs.



WWW.HOWMANENG.COM



ISO Certification Opens Doors That Produce Increased Sales

Star-Glo Industries (SGI) was incorporated in 1950 and now occupies plant and office facilities of approximately 100,000 sq. ft. in East Rutherford, NJ. A privately owned and non-union shop, Star-Glo with the help of its eighty-eight employees has steadily progressed to a leadership position in Swiss screw machining, rubber, rubber-to-metal components, and assemblies.

SGI specializes in custom manufactured parts and assemblies, selling to both commercial and government markets including Military, Aerospace, Electronics, Inflation Components, Transportation, Welding, Packaging, and Business Machines. The Company's complete capabilities guarantee quality control, realistic shipping dates and very competitive prices.

SGI has been in business for over 65 years. Many employees have spent their entire careers at Star Glo. The company had been operating the same way for many decades. Long time clients were now looking for certifications from its suppliers and many doors were closed because SGI was lacking them.

SGI needed a cultural change in which employees are shown an enhanced and more proficient way of operating. In a changing business environment, it was time to update SGI's antiquated Quality Control system. Without certification, SGI would lose a large portion of its current customer base, not be able to win new business and continue to operate in an inefficient manner. With training and certification, SGI would evolve into the company it was meant to be, well situated and capable of tackling future challenges and opportunities.

Ed Peterhoff, President of Star Glo Industries called NJMEP to schedule an appointment to discuss ISO training to achieve certification. During the meeting, NJMEP and Mr. Peterhoff discussed certification requirements at length, the best approach to securing the certification and the cost associated with it. They also discussed the funding opportunity that was currently available through the New Jersey Department of Labor's Skill4Jersey Grant. Securing a grant would greatly reduce the costs for the training, and SGI was a great candidate.

Together, NJMEP and SGI developed a training plan that would meet the certification requirements and not interfere with production. The application was completed and when notification of approval was received, training began. Over a 12 month period, NJMEP trained SGI's employees in ISO Quality Systems.

In the close-out report for the grant, Mr. Peterhoff reported how SGI benefitted from its work with NJMEP, "The ISO certification training was a huge success for us. We improved our overall management system along with operations and information flow. SGI is more competitive now that we have reached ISO certification status. We involved everyone in the certification process whether it was through formal training or tasks that needed to be completed to help us reach certification. It was a real team effort. Throughout the process we uncovered several areas where improvements need to be made, which we are addressing. Our focus had been passing the audit, which we did successfully and it has resulted in new customers."

- Increased sales: \$500,000 as a result of new markets /new customers.
- Retained Sales: \$250,000 as a result of not losing customers who were now requiring certification from their vendors.
- Cost Savings: \$150,000 as a result of greater efficiencies and the reduced training costs
- New Employees: 7 to meet the needs of increased sales.
- Workforce practices: \$75,000 invested in people through grant matching requirements as well as direct investment.

Mr. Peterhoff also noted in his report, "Our instructor, Martin Ziegler was excellent. He pushed us when we needed to be pushed and guided us in the right direction. He was extremely knowledgeable; his expertise was invaluable. NJMEP walked us through the application process right from the beginning and helped us manage the grant throughout the entire process. We would definitely work with NJMEP again. They are a valuable resource for Star Glo."



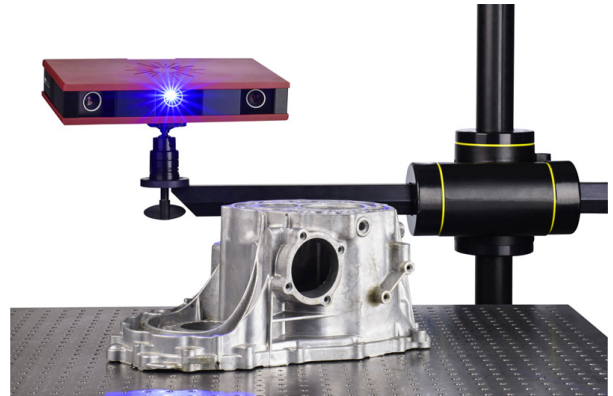
WWW.STARGLO.COM

H & W TOOL COMPANY

Improved Methodologies Assure Product Quality and Market Competitiveness

H & W Tool Company is a custom manufacturer of tools and dies for the Aerospace and Medical Industries. The company, which is located in New Jersey, Virginia and Ohio, provides services nationwide with a focus on the East Coast. Established in 1964 by Henry Winstead and his partner, the company, which has 46 employees across all locations, has been creating quality products for its clients ever since. H & W currently holds ISO 9001:2008, ISO 13485 certifications and is also NADCAP certified in Non-conventional machining (EDM).

Although H & W adheres to ISO 9001:2008 and ISO 13485 certification requirements, the company was faced with more stringent quality controls in order to meet and satisfy its clients' demands, specifically the medical device and aerospace clients. H & W was being forced to go above and beyond its current certification requirements in order to remain competitive. H & W held management review meetings and internal audits, which indicated the need for personnel with increased Quality Management System maintenance skills i.e. more stringent and efficient standards. In order to meet H & W's objective, the company would need employee training. Having successfully worked with New Jersey Manufacturing Extension Program, Inc. (NJMEP) on NADCAP-EDM Certification Training, they turned to them once again.



In order to achieve H & W's objectives of implementing stringent compliance standards that were efficient and allow for cross-checking at the same time, NJMEP recommended training in Process Validation and GMP Awareness. Process Validation is defined as the collection and evaluation of data from design to production. This data establishes scientific evidence that a process is capable of consistently delivering quality products. The GMP, or Good Manufacturing Practices, Training would reduce the risk and liability that can result from poor handling during operation. Together, these programs would assure stringent compliance standards are implemented.

NJMEP also recommended H & W apply for a Skills4Jersey customized training grant to reduce the costs associated with the training. As a small manufacturer, the training cost could otherwise be prohibitive. The application was prepared, submitted and, once approved training began. Over the course of eight months, H & W employees were trained in Engineering Principles and Quality Control Technology.

When asked about how the training benefitted the company, Tricia Winstead, Quality Manager for H & W explained, "The training was invaluable to our staff. We learned detailed and proven methodologies to improve product quality; we implemented best practices; and created state of the art procedures and requirements which we documented, recorded, stored, and furnished according to specifications. This was very helpful to our overall management system."

In addition, when completing the third-party NIST survey that is completed 6-9 months after the completion of a project, Ms. Winstead reported:

- Increased sales: \$500,000
- Retained sales that otherwise were at risk: \$3 Million
- Cost savings as a result of the training and grant award: \$20,000
- Hired 4 new employees as a result of the increased sales.
- Invested \$15,000 in new processes and/or products



Ms. Winstead added, "NJMEP has remained a constant go-to resource for H & W Tool. Its training providers are excellent. They've kept us guided through the training process, provided us with expertise and kept us on track to meet our goals and objectives. We will continue to reach out to NJMEP for their knowledge and expertise."

WWW.HWTOOL.COM

General Devices Grows to Meet Demand

For over 30 years, **General Devices (GD)** has been the leader in providing products and solutions for connecting EMS pre-hospital care providers with emergency medicine in the hospital.

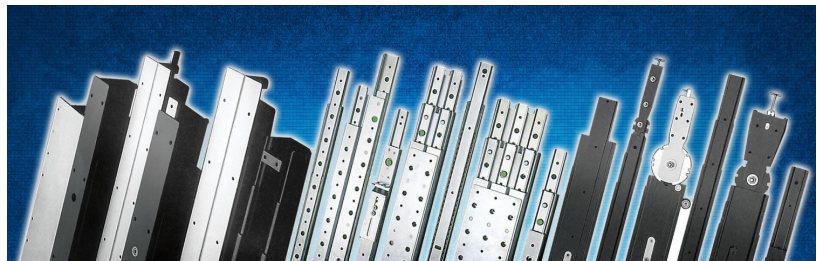
As GD's products handle thousands of ambulance emergency calls a day, GD believes strongly in streamlining response time for efficient customer service. Designing such product innovations as the CAREpoint™ Workstation and e-Bridge Mobile Telemedicine, enabling hospital emergency departments to access all EMS-hospital communications from a single device, GD has made it their mission to provide Responsive Innovation to those first responders and hospitals working to provide emergency care to the public.

In keeping with their goal of delivering top quality products to their clients, GD acquired new technologies to offer the most modern means of service and expand their reach. As the need for their services continued to grow, GD became concerned they would not be able to meet the rapidly increasing demand. Along with this growth came a need for a more streamlined sales approach, as well as the management teams necessary to handle the increase.

NJMEP employed Lean manufacturing techniques to help implement newer, more efficient business practices into GD's operation. By doing so, NJMEP enabled GD to integrate the latest technology into their services, allowing them to better help clients and continue their growth by incorporating NJMEP's expertise. Several training programs were initiated to facilitate GD's needs.

Training Programs Included:

- Admin Lean
- GMP Awareness
- Customer Service
- Managing People and Performance
- Innovation Training



Using the newly acquired Lean training, General Devices was able to parse out administrative roles to an expanded Admin team. This addition not only increased productivity but enabled them to add products to their product line, further increasing sales.

NJMEP provided the knowledge and resources necessary to implement Lean Manufacturing practices for General Devices. The following are a direct result of those improvements.

- Increased Sales: \$50,000.00
- Retained Sales: \$200,000.00
- Cost Savings: \$80,000.00

Along with employing Lean to reduce waste and increase productivity, GD was able to grow the size of their sales team, enabling them to focus on growing their business.

"As a New Jersey-based manufacturer of medical devices and software, we appreciate NJMEP's assistance in improving our company's operations through their training programs, which have helped us maintain our competitive advantage."

Curt Bashford, CEO



WWW.GENERALDEVICES.COM



MINCING OVERSEAS SPICE COMPANY

Mincing Spice Streamlines Operations For Greater Success

Mincing Overseas Spice Company, owned and operated by the Ruparelia Family for over thirty years, has been a mainstay in the spice market since 1927. Offering a full complement of herbs and spices, Mincing Overseas Spice Company provides premium ingredients to clients across the world.

In 1978, Mincing entered the spice cleaning and manufacturing field to complement its trade business. In 1986, Mincing purchased Overseas Spice Company, a grinder and blender of spices, and longtime supplier to the bakery industry with special expertise in cinnamon, ground nutmeg, mace, and ginger.

Mincing continued to expand, concentrating its business activities to industrial users of spices. Along with growth, came the need for a larger facility to accommodate their success. With the acquisition of more modern technologies, it became necessary for Mincing Overseas Spice Company to relocate into their current 50,000 square foot manufacturing facility.

Their rapid growth coupled with the increased facility size demanded a different way of doing business. NJMEP was there to assist with customized training programs and practical industry improvements for success.

NJMEP utilized its resources to introduce Lean HR and Manufacturing concepts to streamline their business internal development. Furthermore, NJMEP assisted in the acquisition of an ERP system to manage the increased need for supply chain management, sales order processing, and human resources support.

- Provided guidance in the Selection of an ERP system
- Lean Manufacturing Training
- Lean Human Resource Development Training

The following statistics are a direct result of NJMEP's involvement with the Mincing Overseas Spice Company, and Mincing's willingness to adopt key business improvements to ensure continued success.

- Increased Sales Amount: \$800,000.00
- Retained Sales Amount: \$1,500,000.00
- Cost Savings Amount: \$15,000.00
- Plant Equipment Savings Amount: \$250,000.00
- Info System Savings Amount: \$150,000.00

The President and CEO of Mincing Spice, Manoj Ruparelia, had this to say about his experience working with NJMEP, "Mincing Spice Company and NJMEP's relationship began in 1996. Since then, Mincing has grown to be globally recognized in the food industry, and contributions by NJMEP have been beneficial in Mincing's growth."



WWW.MINCING.COM

Falstrom Company Obtains ISO 9001: 2015 Certification with Help from NJMEP

Established in 1870, **Falstrom Company** is an industry leader serving the Aerospace and Defense industry with custom, battle proven, rugged enclosures and electronic assemblies for avionics, mission critical shipboard systems and platforms. Recognized by their clients for quality and performance they are a preferred supplier for the US military including the Navy and Coast Guard. Falstrom Company operates out of their Passaic, NJ location; a 90,000 sq ft facility employing approximately 117 employees.

Falstrom Company was looking to upgrade their ISO 9001:2008 certification to ISO 9001: 2015, in order to improve internal operations, further bolster its reputation for quality products, and increase their customer base. Without this registration, Falstrom would not have been able to accept orders from existing customers. Additionally, compliance with the ISO standard was needed so Falstrom would have the ability to reach potential clients that require this international standard. Falstrom Management turned to NJMEP due to their long-standing successful relationship, to upgrade, develop and implement all quality systems and procedural documentation necessary to meet the requirements of ISO 9001:2015 Quality Management System Standards.

NJMEP conducted a business assessment and presented them with a structured approach to attaining ISO 9001: 2015 Certification and introduced a continuous improvement methodology. It was determined that additional funding was a necessity and NJMEP helped them apply for a Training Grant, which subsequently was approved. Over the course of the year, Falstrom was guided through the documentation required for the ISO Certification.

NJMEP's process included:

- Reviewing and modifying all processes; and making sure they met requirements of ISO standards
- Weekly meetings with the Quality Management Systems team
- Training in practical problem solving and auditing techniques to reduce costs, improve performance and ensure continued compliance with the ISO standard
- ISO 9001:2015 quality management system development and implementation

The NJMEP team oversaw the creation of Falstrom's new quality manual. ISO quality standards dictate that a company demonstrates the effective performance of its management review process, which meant an in-depth auditing of Falstrom's operations. NJMEP met with Falstrom's management team regularly to review the findings of the audits and implement corrective actions. In total, the process for achieving ISO 9001: 2015 certification lasted approximately 12 months, with the first 6-7 months dedicated to reviewing the processes, designing and implementing Falstrom's ISO system, and the last 5-6 months used to actually run and then audit the newly installed system prior to the final registration audit.

Falstrom Company was awarded its ISO 9001:2015 Certification. This process helped the company to identify areas where they excelled as well as areas of improvement. They were able to develop internal audits, create a calibration system, post performance measures, develop and post QMS documents, and implement ISO training. Overall, the training Falstrom received enabled them to better compete with companies in lower costs states.

Falstrom Company benefited greatly from NJMEP's help in many ways:

- | | |
|--------------------------------------|--|
| ▪ Increased sales Amount: \$500,000 | ▪ Employees Retained: 52 |
| ▪ Retained Sales Amount: \$4,000,000 | ▪ Workforce practices Amount: \$50,000 |
| ▪ Cost Savings Amount: \$250,000 | ▪ Plant Equipment Savings Amount: \$125,000 |
| ▪ New Employees Hired: 12 | ▪ Information Systems Savings Amount: \$25,000 |



"We would definitely recommend NJMEP to anyone looking into an ISO certification. NJMEP has helped us over the years to improve several aspects of our company. Becoming ISO 9001: 2015 Certified was something we really needed to do, and the funding, guidance, and encouragement provided gave us the ability to obtain the certification." Clifford Lindholm, President and CEO, Falstrom Company.

WWW.FALSTROMCOMPANY.COM

PRECISION CUSTOM COATINGS LLC

Precision Custom Coatings Goes Through a Lean Transformation

Precision Custom Coatings LLC manufactures and distributes interlining products. The company offers woven, nonwoven, and knitted fusible; needle punch and fiberfill; top fuse and sew-ins interlinings. Additionally, it provides adhesives, taping solutions, stretch linings, mattress and pillow encasing allergen-proof fabrics, and mattress protectors. The company caters to Filtration, bedding, automotive, and apparel markets. Precision Custom Coatings LLC was founded in 1987 and is headquartered in Totowa, New Jersey.

The cluttered environment of the factory floor and machine shop mitigated their process flows and negatively impacted production and the quality of work. Precision Custom Coatings recognized the need for Lean training in order to avoid hurting their overseas and domestic position with major customers. Precision Custom Coatings embarked on their Lean journey with the help of NJMEP. The first step in the journey consisted of an on-site assessment and a recommendation on how 5S System techniques followed by introduction of Lean concepts can help all production workers.



The 5S system is a Lean process that is organized around the following ideas: Sorting, Setting in Order, Shining, Standardizing and Sustain. The goal is to create specific places for paperwork, tools and equipment so that they can be located within 30 seconds. The 5S process relies on employees taking control of their work areas and suggesting and implementing improvements.

The Training Allowed Participants to:

- Describe the difference in workplace appearance and functionality before and after 5S process has been applied
- Perform an in-depth audit of workplace organization and standardization
- Organize the workplace by applying the concepts of sort, set-in order and shine
- Standardize procedures to maintain and control an organized workplace using visual controls
- Describe how 5S can help to improve workplace environmental health and safety
- Experience firsthand how 5S system reduces waste and improves productivity and quality

Satisfied with the training, Precision Custom Coatings began applying Lean processes to the manufacturing floor. Floor level training and improvements helped minimize the time spent travelling between different work stations and around misplaced equipment, resulting in increased work efficiency. They've worked at sustaining the changes they've made and to continually find new ways to make the process better, cleaner, and faster.

Over the past year, the company has increased significant growth gains, including:

- Increased Sales: \$1,300,000
- Cost Savings: \$150,000
- Savings on Investments: \$50,000
- Workforce Practices: \$99,000
- Employees Retained: 5



Mohammed Kovangji, Director of Operations said, "Precision Custom Coatings has seen growth in both sales and employee size since working with NJMEP. Our staff has put into practice lean manufacturing skills, and the training has had a lasting impact on our company's day-to-day routine. 5S is far more than just straightening up and cleaning. It involves reviewing and re-thinking each employee's activity, and making sure their work area supports their work. NJMEP's assistance has proven vital to both our short and long-term successes."

WWW.PRECISIONTEXTILES-USA.COM



Workforce Training Empowers Employees and Significantly Improves the Bottom Line

Zytron Control Products, which is located in Trenton, New Jersey, was founded by two engineers in 1985. Between them there was almost a century of combined experience in the temperature control business. This combination of experience made Zytron uniquely suited to service a broad array of special applications. The company and its 20 employees provide Original Equipment Manufacturers (OEMs) temperature and process control products for a variety of domestic markets and to multi-national corporations, earning itself the reputation as an industry leader in engineering innovation. In addition to earning a stellar reputation, Zytron received a New Jersey Manufacturing Award for Bold New Strategy for the internal process improvements it implemented through its work with NJMEP.

Though the company was doing well, off shore competition always loomed on the horizon. To head off what could be a disastrous fate, Zytron's President John Wilkinson once again turned to New Jersey Manufacturing Extension Program, Inc. (NJMEP) as he wanted to improve on-time delivery and quality to customers while increasing productivity. With the help of a no fee assessment NJMEP, was able to determine how best to achieve Mr. Wilkinson's objectives.

The assessment indicated Zytron was an ideal company to introduce Lean Manufacturing into its operations and Mr. Wilkinson, who had already learned of the benefits of Lean, thought it was a good time to apply the concepts. NJMEP also realized the company was an excellent candidate for a Skills4Jersey, customized training grant. As a small company, a grant would be a major cost savings. A plan was developed; fifteen employees would be trained in: Value Stream Mapping w/Implementation, implementing 5S for Workplace Organization, Using Standard Work Methods in Cells, Cellular Flow w/Implementation and Pull Kanban Systems w/Implementation. Together NJMEP and Zytron completed the grant application.

While awaiting the grant approval, the company invested in a Lean introduction class that demonstrated how Lean tools are applied and what the benefits would be to the organization. Everyone participated in the workshop, which created excitement and helped to build camaraderie throughout the organization as well.

The grant was approved and over the course of one year, Lean tools and techniques were integrated into Zytron's processes improving some and completely changing others. The results included:

- Production doubled in some areas, and quality improved significantly reducing any required rework
- One year after the Lean Standards were integrated, Zytron achieved a perfect on-time delivery record
- Lead times have decreased dramatically
- Zytron achieved a threefold improvement in efficiency by incorporating Lean tools into their processes, visual factory cues to show when jobs are ready to start, and key performance indicators to track their daily results and cumulative monthly results

When surveyed Zytron attributed the following to the work that was done:

- \$700,000 in new sales
- 6 new employees were hired
- \$665,000 in cost savings was achieved. \$24,000 of which was in training costs as a result of Skills4Jersey investment in the company
- \$60,000 invested in workforce development part of which was required as a match to the grant
- \$150,000 invested / saved in new products /processes

John Wilkinson explained, "We have transitioned to a cell manufacturing model. Each cell requires multiple assemblers. We have added several people to staff the initial cell and as we increase our manufacturing capacity to meet anticipated product demand additional cells will be required which must be staffed."

Mr. Wilkinson went on to elaborate, "This training has had a huge impact on our organization. It was a first for most of our employees—they loved it and the business has benefited from it as well. The project helped us learn how to empower our employees and utilize them more fully. Our employees have also embraced the knowledge gained, are more self-sufficient and have accepted new responsibilities and morale is great all around! The Lean methods have improved our processes helping our employees work more efficiently and removing waste from our current operation."

WWW.ZYTRON.COM



VEHICLE SAFETY MANUFACTURING

Educated Workers Streamline Operations to Keep Manufacturer Competitive

Vehicle Safety Manufacturing (VSM), a division of Rostra Precision Controls, Inc., operates its plant in Newark, New Jersey. The company which was founded in 1979 is the largest manufacturer of heavy-duty turn signal switches in North America. The ISO certified company serves both the OEM and replacement markets. VSM products are in use on vehicles and equipment worldwide as they serve customers in North and South America, Europe, Asia, Australia and Africa.

VSM designed its manufacturing facilities to produce high quality products in the most efficient & economical manner. The company utilizes state of the art equipment, employs a top-notch engineering staff and operates a tough quality control department to assure that it's VSM products are engineered and built to the most exacting of standards and meet or exceed all DOT and SAE requirements (when used as recommended).

In 2015 VSM acquired the turn signal switch product line from Grote Industries, Inc. in Madison, Indiana. The assets and manufacturing lines were relocated to its Newark plant. In a global market it is critical that companies remain competitive and it is especially true in the Class 8 truck supply business. VSM must continually work to improve its efficiency in order to reduce its manufacturing cost. Having worked with NJMEP to implement Lean and ISO over the years VSM once again worked with them to streamline the plant.

After assessing the current situation, NJMEP recommended using Lean tools and techniques to achieve factory flow improvements. As a small business, due to the cost, training in these methodologies would have to be spread out over 3 years. NJMEP recommended applying for a Skills4Jersey Grant to enable VSM to meet its objectives within 1 year. They then assisted with the application and when approved, the management of the grant process.

Over the course of one year NJMEP's resources worked with VSM to educate its production workers and managers in Value Stream Mapping, Set up Reduction/Quick Change, Cellular Flow, Production Pull/Kanban, Project Management, ISO Quality System and English as a Second Language. These courses cross trained workers enabling them to better understand the entire process and enabled them to recognize problems and present viable solutions.

When completing the close-out report at the conclusion of the grant, Rebecca Kirshman, VP and General Manager, VSM, indicated the company:

- Hired new workers
- Started a new line for manufacturing switches
- Reduced waste
- Increased daily production
- Was able to maintain the selling price of its products in spite of higher wage and material costs because of the increased productivity of its workers

Ms. Kirshman, in completing the independently conducted NIST survey, which is done 6-12 months after a project ends, reported:

- Increased sales \$150,000
- Created 21 jobs and promoted 5 employees
- Achieved a cost saving of \$35,000
- Invested \$250,000 in new processes and products

Ms. Kirshman, when asked about working with NJMEP responded, "I was very pleased with the work NJMEP did for us with our workforce. Thanks to them our employees understand the importance of cross training and they have honed their skills. It's that understanding and those skills that have helped us remain competitive in this global market."



WWW.VEHICLESAFETYMFG.COM

Workforce Training Generates Cost Savings and Company Growth

Henry Troemner founded **Henry Troemner LLC** over 170 years ago in 1838. The company started as a manufacturer of scales and weights in Philadelphia, Pennsylvania. The manufacturing of laboratory equipment began in 1963 and in 1993 Troemner became one of the first companies in the Philadelphia area to earn ISO 9001 certification.

Troemner's laboratories are accredited by both the National Institute of Standards and Technology (NIST) administered National Voluntary Laboratory Accreditation Program (NVLAP) and the United Kingdom Accreditation Service (UKAS). Troemner is now located in Thorofare, New Jersey, where it currently employs 140 people.

Henry Troemner and NJMEP have a long-standing relationship, going back to 2006 when the company embarked on its Lean transformation. Eight years later Troemner remains committed to remaining on the leading edge of its industry. In pursuit of excellence, the company maintains a continuous improvement program. As part of this program, NJMEP and Troemner identified areas to focus on: quality performance, productivity, new product development and market penetration. To help Troemner with the cost of training, NJMEP would assist in the application and management of a New Jersey Department of Labor (NJDOLE) Customized training grant.

To meet its objectives, NJMEP designed a training program consisting of: Six Sigma Problem Solving, MRP (Material Requirements Planning), SPC (statistical process control), as well as Inventory Excellence. Based on the proposed program, Troemner was approved for funding.

Working with NJMEP's Trainers Troemner's workforce took part in seven (7) courses:

- Six Sigma Green Belt Certification Training
- Problem Solving
- PC Skills –Project Management
- MRP
- Logistics and Materials Management
- SPC
- Inventory Accuracy



Thirty-five (35) front line technical, logistical, and engineering employees over all operational classifications took part in the training that provided them with the technical skills of Design of Experiment, Six Sigma, Microsoft Project, and Materials ERP skills.

As a result of tools and techniques that were learned in this round of continuous improvement training, Troemner reported significant impact when surveyed by NIST.

- Generated a cost savings of \$250,000
- Grew by 10 jobs and retained 10 jobs that otherwise would have been lost
- Saved \$32,000 in training costs as a result of the grant
- Invested \$200,000 in new process and/or products
- Grew Sales by 3.3%

Stephen Butler, the Vice President of Operations of Henry Troemner LLC, explained, "NJMEP was instrumental in assisting us in obtaining a DOL Training grant which funded this project. Through this project we improved our schedule management and adherence. In doing so, we increased sales, through increased customer service and satisfaction."



NOVEL INGREDIENTS

New Leadership, New Facility and Workforce Training Positions Company for Growth

For over 15 years, **Novel Ingredients** established a standard of excellence in the distribution of premium botanical ingredients. Under the new leadership, Novel has invested significantly in its people, their processes, and infrastructure, including the purchase in 2014 of a state-of-the-art manufacturing plant in East Hanover, NJ, USA. Having transformed the business, the company can now offer partners a remarkable portfolio of ingredient innovations, process technologies, and a suite of manufacturing capabilities.



Novel offers a wide range of services, including wet and dry milling, blending, granulation, agglomeration, and instantization within its 40,000 sq. ft. production space. The Company also offers full pilot plant and powder product development capabilities. The manufacturing site is ISO 9001 certified, USDA Organic and Kosher certified, and is an NSF GMP registered facility. Novel also maintains an Asia purchasing and quality office, based in Xi'an, China.

The long term plan for Novel Ingredients required an aggressive strategy to meet its growth objectives. To do so there was a new team, plans for a move and need to change its certifications and improve its processes. Taking on these major changes could derail a company achieving its objectives but Novel did not plan to have that happen. To stay on course, they brought in New Jersey Manufacturing Extension Program, Inc. (NJMEP).

NJMEP suspected Lean manufacturing Tools and techniques would benefit Novel so a Lean Assessment was conducted. The results confirmed Novel was an ideal candidate to transform its processes to a Lean model. NJMEP explained to the company it was an excellent candidate for a NJDOL Skills4Jersey Grant. The grant, if approved would greatly reduce the costs for implementing Lean which would improve its processes and change its certifications.

Working closely together, Novel & NJMEP developed an implementation plan and submitted a grant application. Once approved, implementation began. NJMEP and its team of resources trained 79 employees from front office, management and production in Lean, Business Management/Plant Layout, Excel, Quality Control Technology, Industrial manufacturing Technology and Materials Sciences. Training took place while Novel was in the middle of moving from West Caldwell, where they had 5 GMP processing rooms, to the larger facility in East Hanover, where they have 35 GMP processing rooms. They were also going through the transition from a privately held company to an investment group ownership. Additionally, the changes they made in manufacturing required them to switch from complying to FDA's 21 CFR 110 (food) to 21 CFR 111 (finished dietary supplement manufacturer).

The training program helped bring more people into compliance with the expanded GMP regulations of 21 CFR 111. With the training, they were able to make a smooth transition related to the growth of going from 5 processing rooms to 35 processing rooms. The training enabled Novel to use Lean Processing techniques to develop the process flows of a much more complicated production flow with the larger building.

When responding to the NIST survey on the impact of the project, Novel reported:

- Increased sales by \$800,000
- 6 new hires
- A cost savings of \$800,000 that included \$48,800 in training costs as a result of the Skills4Jersey Grant.
- \$180,000 invested in new processes and products

"NJMEP's four trainers were all excellent. They were knowledgeable of the industry and were able to go very deep into what Novel would need to continue growth. They were able to talk to different levels within the company from corporate positions to non-technical workers on the shop floor. I was most impressed by the wealth of knowledge and their ability to pull out real life examples of the topics being trained, which made the training easier to understand and put into perspective. I would highly recommend NJMEP and its team."



WWW.NOVELINGREDIENT.COM

New Job Descriptions and More Efficient Production Practices Improve Organization

Atlantic Casting and Engineering (ACE), a privately held company, was established in 1937 by a group of engineers from Curtis-Wright Aeronautical Corp. Their plaster mold casting process supplied customers with non-ferrous castings of close tolerances, high integrity, intricate detail and smooth surfaces. The company utilizes the latest technology in the shell investment process, guaranteeing that all its aluminum alloy suppliers conform to the United States Conflict Minerals Law and in addition has a separate division that specializes in CNC machining and other value-added operations to supply completely finished parts. The company, which sells internationally, holds numerous certifications and awards.

Brian McGrady, the President of Atlantic Casting & Engineering Corp (ACE), had two objectives: complete the development of new job descriptions and resolve some issues on the factory floor that were hampering output. Mr. McGrady turned to New Jersey Manufacturing Extension Program, Inc, (NJMEP). He explained, "NJMEP previously assisted us with a number of projects including ADA compliant job descriptions and with process improvements in our plant so we naturally reached out to them as we have a long successful history working together."

NJMEP brought in two specialists to assist Mr. McGrady in meeting his objectives. First Job Descriptions were addressed. NJMEP and its resource met with ACE Principals to discuss organizational structure, reporting line, job titles, physical requirements, work environment, interview managers/supervisors or employees to determine job duties. Once information was gathered draft job descriptions were developed then reviewed with management. Once finalized, ACE Principals received both hard and electronic copies of the descriptions.

Over the course of six months the factory concerns were addressed by assessing output problems. This assessment resulted in identifying capacity, flow and quality as the issues. To rectify these problems, a plan was developed using various lean tools, techniques and training to improve the situation.

Upon completing the work on job descriptions and factory output ACE achieved its objectives. The new job descriptions, which meet ADA requirements, act as organizational development tools, assist in recruiting, help with orientation of new hires and meet a requirement when going for Quality Certifications. The plant work improved capacity, flow and quality. It also reduced part shortages while greatly enhancing inventory management.

When reporting the impact of the project work done with NJMEP to NIST, Mr. McGrady cited:

- Increased sales of \$3,400,000
- Hired 10 new employees
- Achieved a cost savings of \$350,000
- Invested \$65,000 in new products /processes and \$25,000 in its workforce

He added, "NJMEP has been extremely helpful in the growth of our company over the years."

