Delivering Measurable Results
by Bob Bengel, NWIRC President/CEO

The National Institute of Standards and Technology’s Hollings Manufacturing Extension Partnership (NIST MEP) recently released its 2014 Annual Report and the numbers tell the story. In 2014, the national network of MEP Centers served over 30,000 manufacturers.

Of 8,353 clients selected by NIST MEP to be surveyed, 6,088 (73%) completed the survey and reported that the assistance they received from MEP Centers generated a total of:

- $6.7 Billion in New and Retained Sales -- $2.5 Billion in new sales and $4.2 Billion in retained sales;
- 63,952 New and Retained Jobs – 17,883 new jobs created and 46,069 jobs retained;
- $2.7 Billion in New Client Investments – clients invested in new plant and equipment, new products, processes, workforce and technology, and
- $1.1 Billion in Cost Savings – cost savings reported by MEP clients were in areas such as labor, materials, inventory, and energy.

For every one dollar of federal investment, the MEP generates nearly $19 in new sales growth and $21 in new client investment.

For every $2,000 of federal investment, MEP creates or retains one manufacturing job.

As one of 59 MEP centers nationwide, the NWIRC is proud to be part of the MEP and committed to strengthening manufacturing in northwest Pennsylvania. Last year, we managed projects with over 90 clients that generated $8.6 million in new sales, $2.1 million in cost savings, and $14.9 million in new client investments.

Visit our new website at www.nwirc.org and let us know what our business advisors and consultants can do for you.

Are You Ready for Automation?
by Michael Griffith, NWIRC Innovation Engineering Specialist

Being a competitive manufacturer in the global marketplace means reducing your cost of operations, reacting quickly to customer needs, and utilizing technology and a skilled workforce to increase manufacturing efficiencies. All of which can be accomplished with automation. First and foremost, automation is not about replacing workers, but rather relieving workers of repetitive, tedious, and/or hazardous tasks in favor of higher value-added operations. Workers are highly skilled resources that can solve problems, create efficiencies and perform complex actions and should be utilized as such. As with most processes, merely getting started is the toughest hurdle to climb. Deciding whether automation is right for your business and which operation to automate are difficult questions. Here are five points to consider when deciding whether to automate a process or not:

1. Increase throughput – Could your business benefit from increasing capacity of a particular product or from a particular machine?

2. Improve quality – Properly set up processes are accurate, precise and repeatable.

3. Improve safety – Operations that are dirty, hot, physically demanding, require repetitive motion or involve hazardous materials are prime candidates to be replaced with automation.

4. Maximize floor space – Manual labor requires room on the floor to move about safely; automated machines can be designed and configured to make optimal use of available floor space.

5. Replace a diminishing workforce – Nearly every manufacturer faces the similar issue of an aging workforce that is nearing retirement and an empty pipeline to backfill with. Automation reduces a manufacturer’s risk due to the lack of a skilled workforce.

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Automation (Continued from page 1)

Automation technology has improved to the point that automated machines are now considered very flexible, perform various tasks during a single program, cost-effective, and provide numerous benefits to both the manufacturer and workforce. To discuss whether automation is right for your business, contact your NWIRC Business Advisor.

Successes & Highlights

SEPCO Automates Success

Can cool robots and machines drive up sales and profits? At South Erie Production Company (SEPCO), President and Owner, Dan Ignasiak, thinks so!

Ignasiak knew someday SEPCO would have a robot operating one of their machines, not only because of the coolness factor, but because of the efficiencies it would afford the company. In order to keep SEPCO financially healthy, SEPCO needed to increase plant capacity to accommodate bringing in new business.

According to Chris Pederson, Operations Manager and Mechanical Engineer, the challenge was identifying which process would benefit the most. He said, “We ended up taking the dirtiest job in the shop and making it the coolest.” Ignasiak adds, “This kind of technology will attract more young people into manufacturing. And if the company didn’t keep up with technology, I figure we’d be out of business in less than 10 years due to the advancing nature of the industry.”

SEPCO, located in Summit Township, Erie PA, is a manufacturer specializing in fabricated metals including tube cutting, end finishing, and banjo fittings. They produce millions of parts annually, turning commodity metal stock into value-added and often complex parts that supply engine manufacturers. The company was founded in 1966 by Leo Ignasiak, who had the vision of starting the company after being fired from his manufacturing job at the age of 50. It’s this vision that his son Dan and all the employees carry out today, with the mantra that SEPCO is all about “great people running really cool machines.”

The robotic arm, named Rosie after the Jetsons’ household robot, was installed on May 12, 2015 with the systems integration expertise of NuTec Tooling Systems from Meadville, PA and a grant provided by the Northwest Industrial Resource Center (NWIRC). After only two days post-installation, Ignasiak said, “It was exciting to actually see her run and have an immediate impact. Without any tweaking yet, we’re already producing more pieces per hour and are confident we’ll hit our 40% increase in throughput goal.” Ed Barthelmes, NWIRC Strategic Business Advisor, noted “The NWIRC is proud to provide grant assistance and support Dan on this high-impact project for SEPCO.”

So now that Rosie is hard at work, what happens to Charlie, a 29-year veteran machinist of SEPCO who operates the machine? Charlie now works side by side with Rosie to focus on process and logistics assurance, product quality, and new process design. “I’m excited, but a little nervous at the same time because it’s a new process to our operation,” he said. “I see the upside of working with robotics as I no longer have to deal with repetition, removing parts with burrs or sharp edges from our tooling, and the random lubrication mess that can result when working so close to our machine.”

SEPCO’s website shows a timeline of milestones for the company. Their last milestone reads, “I want our first robot!” As it turns out, that day is now here!

Utility Rebate Program: Squeeze Fat Savings Out of Thin Air

Geoff Bristow, Energy Program Manager, PA Department of Environmental Protection

It’s certainly no secret that compressed air systems in industrial facilities present among the best opportunities for energy efficiency improvements and cost savings. However, it may be news to some that there is now financial assistance from your electric utility specifically designed to help reduce energy costs in your compressor system.

Compressed air is an integral, valuable, and inherently inefficient method of energy use in manufacturing. Over time, even well designed and maintained systems will lose efficiency due to aging equipment and demand side modifications or additions driven by plant changes and expansions. A comprehensive, system-wide compressed air audit, partially funded through your electric utility’s energy efficiency program, can help you minimize inefficiencies and maximize savings.

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“System-wide” is the key term when it comes to compressed air audits. It’s common to think in terms of improving efficiency solely by upgrading or adding equipment on the supply side, such as new compressors, controls, or additional storage. But some of the best paybacks can be found throughout the plant on the distribution and demand side, downstream of the compressors. Sure, you will want to address partially loaded or inadequately controlled compressors, but you may also have substantial air leaks and piping restrictions in the distribution system, inappropriate or poorly regulated end uses…all of these contribute to system inefficiency and increase electric bills. Listen to your shop floor during breaks or off hours. Hear that hissing sound that may otherwise blend into the background during a busy shift? That’s the sound of money and shouldn’t be accepted as status quo. While supply side improvement projects often involve significant capital investment, demand side and distribution projects can often be completed at low or even no cost with in-house staff.

If your facility has never had a full, system-wide compressed air audit, now may be the time to plan one. Recently approved rate increases for FirstEnergy utilities (Penelec, Penn Power, West Penn Power, Met-Ed) mean that any inefficiency in your system will now cost your more. Secondly, those same utilities are offering significant financial incentives that target efficiency opportunities in your compressed air system.

Customers of FirstEnergy utilities in PA can receive cash rebates under the Compressed Air Direct Action (CADA) program to help pay for comprehensive compressed air system audits and implementation of resulting projects. CADA provides two types of rebates, both based on annual kWh saved after implementation of the improvement projects. The first rebate provides up to 50% of the cost of the compressed air system audit. The second provides an additional cash rebate of $0.05/kWh for implementation of efficiency projects in both supply and demand/distribution sides that result from the audit. Note that rebate amounts may vary depending on the specific utility and rate schedule, but most in NW PA will qualify for a rebate equal to $0.05/kWh saved per year. The rebates are applicable to projects implemented through May 31, 2016, including projects already completed, as long as they were not completed more than 180 days before you apply.

For more information on the CADA program, including contact information and application procedures, visit the program website at www.energysavepa-business.com, select Compressed Air from the drop down box under the Incentive Programs heading. CLEAResult is the contractor who runs the FirstEnergy efficiency rebate programs.

Where can you turn to find compressor system auditing expertise? Most major compressor vendors and manufacturers (Ingersoll Rand, Sullair, Kaeser, Quincy, etc.) offer auditing services and may be a good place to start. Some prefer to go with a 3rd party auditor to avoid perceived equipment bias or expectation of capital purchase from the vendor. Some auditing consultants evaluate compressed air systems as part of a bigger-picture, plant-wide industrial energy audit (Industrial Energy Engineering in Wexford is one, along with any of several larger engineering firms such as Siemens and Johnson Controls). Then there are compressed air system specialists - consultants that dedicate all or most of their expertise to compressed air systems and will identify, quantify, and prioritize air system improvement projects (CH Reed in Erie, AirPower USA in OH). Finally, an in-house audit with your own staff may also qualify for the rebate. To be eligible for utility rebates, all audits must meet minimum standards specified by the CADA program.

As for the cost of an audit, much depends on the size, complexity, and condition of your compressed air system. Typical costs range from $2,000 to $20,000. With a rebate of up to 50% of the audit cost, plus the likely savings opportunities that will result, and a $0.5 per kWh rebate for project implementation, there may be no better time than now to take a close look at the savings opportunities across all elements of your compressed air system.

Geoff Bristow is also the Chair of the Energy Roundtable.

**Continuous Improvement**

**Think Lean**

Creating and maintaining a culture of continuous quality improvement involves trained leadership who will engage the entire organization in the process.

**Becoming a Lean Champion**

**can be the first step!**

**LEAN Champion Certification**

October 27, Nov 3, 10, 17 2015 (Corry, PA)

For more information contact your Business Advisor or visit www.nwirc.org.

**Manufacturing Day**

Manufacturing Day is Friday, October 2, 2015. Now is a great time to start planning your tours and special events. Be sure to register your activities at www.mfgday.com and ask others in your community to get involved!
YOUR STRATEGIC BUSINESS ADVISORS

If you have questions, or would like to speak with someone from NWIRC about services, please contact your Strategic Business Advisor:

**Tom Weible**  
814.590.5202  
Cameron, Clarion, Clearfield, Elk  
Jefferson, McKean & Potter Counties

**Susan Hileman**  
814.572.2077  
Crawford, Forest, Mercer & Venango Counties

**Ed Barthelmes**  
814.923.3084  
Erie & Warren Counties

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**UPCOMING EVENTS**

**Detailed Scheduling & Planning**  
*August 7, 14, & 21*  
Location: Meadville  
Focuses on various techniques for material and capacity scheduling. Includes descriptions of material requirements planning (MRP), capacity requirements planning (CRP), inventory management practices, and procurement and supplier planning.

**Advanced OSHA Compliance**  
*September 17 / 23 / 29*  
Locations: Erie / Franklin / St. Marys  
Become educated on preparing your facility to complete a successful regulatory inspection. Learn how to tabulate injury impact to the bottom line, and establish an effective risk management program.

**Execution & Control of Operations**  
*October 2, 9, 16*  
Location: Meadville  
Targets areas of prioritizing and sequencing work, executing work plans, implementing controls, reporting activity results, and evaluating feedback on performance. Includes techniques for scheduling and controlling production processes, the execution of quality initiatives, and continuous improvement plans.

**Lean Champion Certification**  
*October 27, Nov 3, 10, 17*  
Location: Corry  
Hands-on training and one-on-one assignments specific to your manufacturing business. The program is presented once a week for 4 weeks. Principles of Lean and Value Stream Mapping (the first two sessions) can be taken as separate training.

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For more information or to register for training, visit [www.nwirc.org](http://www.nwirc.org)