New Year’s Resolutions for Industry 4.0

by Bob Zaruta, President/CEO, NWIRC

Well, it’s the start of another new year. In late December (sitting by a cozy fire, head tilted, looking up slightly, and stroking my chin), New Year’s resolutions came flashing through my mind with the question, “should I make them or not?” I recall reading that only 8% of people achieve their resolutions, but also that a person is 10 times more likely to achieve their targeted improvements compared to those who don’t explicitly make resolutions at all. I decided to do it. But rather than the usual focus on self-improvement, I looked towards improvements from an organizational perspective. After all, in addition to providing consulting and training services aimed at improving the business of our clients, the NWIRC is a business too. Our organization shares some of the same goals and improvement objectives as the small and mid-sized manufacturers in northwest Pennsylvania that we serve.

So, with all of our businesses in my mind, I offer the following New Year’s Resolutions or perhaps better referred to as Best Practices for 2017:

1. Recalibrate the Revenue Engine

As we look to drive higher value through existing and new offerings, have greater impact on client’s business, and improve financial viability, we need to continuously recalibrate our revenue engine. We can do this by staying in front of the client’s existing and future needs and problems. All parts of our business development functions need to be in alignment. Our messaging, value propositions, and differentiating capabilities need to be expressed clearly, concisely, and consistently. Our process to build client relationships as trusted advisors must be formally defined while incorporating proven best practices, milestones, verifiable outcomes, and execution tools.

2. Greater focus on leveraging technology to improve processes and transform our business

Look to expand the use of various information technologies (IT) including cloud-based applications and hosting, analytics, mobility, and the Internet of Things (IoT). Improve use of the Client Relationship Management (CRM) system to enhance outreach and business development efforts, improve efficiencies, and better serve clients.

3. Provide a continuous learning environment for staff professional development

Our single greatest asset is our people. Strategic investments in their professional development will enable the organization to grow, expand service offerings, increase market penetration, and enhance the outcome of engagements and client satisfaction.

Emphasis on these key resolutions in the New Year will enable us to be trusted advisors, thought leaders, and agents for change as physical and digital manufacturing merge and Industry 4.0 (the fourth industrial revolution) evolves in the years to come.

ISO 9001:2015 – It’s Been Here All Along!

by Kevin Smith, President Vie Associates, LLC

As many organizations are beginning to realize, the new ISO 9001 standard brings to the table some new requirements along with some confusion as to the intent of the changes. Two of the most notable additions include the requirements that organizations consider: 1) the context in which they operate, and 2) the needs of interested parties. Both of these new requirements are more explicit than their counterparts in the old standard for sure – but not actually new. The old version of the standard tried to address risk management in the quality management system, but with little
success in practical application. The 2008 version of the ISO 9001 standard did, after all, include a Preventive Action clause. This in essence was a risk management requirement since it required the identification of potential problems – or risks - before they became actual nonconforming issues. The problem in application was that many quality system managers did not understand how to get preventive action ideas into the system. This would typically result with an empty Preventive Action log most of the year with a last minute scurry to populate some entries before the registrar would come to audit.

The ‘context of organization’ and the ‘needs of interested parties’ provide management with a discussion guide for risk management. The context of the organization requirement encourages management to discuss the political, economical, social, and technological factors within their environment and determine what risks and opportunities are present. The needs of interested parties requirement guides management in uncovering risks and opportunities associated with various stakeholders and their needs and expectations.

These two new clauses, along with a basic understanding of risk throughout the organization, provides a focus on prevention rather than detection and gives top management a great place to start their discussion regarding the identification of risk. This focus on risk management appears to be the ISO 9001 developers’ definitive stance on effective preventive action.

As a gentle reminder, the deadline for compliance to the revised standard is September 2018.

Kevin Smith, President and Founder of Vie Associates, has spent most of his career assisting leaders in improving organizational performance and maximizing human resources.

**Onex: STEM Manufacturing Intern Produces Big Results**

Onex began in 1965 as a supplier to the many foundries in the Erie, PA area, stocking refractory products for a major refractory manufacturer. In the 1980s, they branched out into other heat intensive industries. As the number of foundries in Erie began to decline, they diversified into other heat intensive industries. Onex began in 1965 as a supplier to the many foundries in the Erie, PA area, stocking refractory products for a major refractory manufacturer. In the 1980s, they branched out into other heat intensive industries. As the number of foundries in Erie began to decline, they diversified into other heat intensive industries.

Onex became a “one stop shopping” source and a solutions provider for its growing and extensive customer base. In more basic terms, “we build and maintain industrial furnaces that operate at over a 1000F,” said Drew Walters, VP of Engineering and Construction. The company has expanded to Pittsburgh and recently moved their Erie location just miles away to better serve their future growth. Onex’s General Manager, Ashleigh Walters, says the company has always been committed to working with student interns. “Ultimately, our goal is to get to know some talented students who we may be interested in hiring in the future,” she said. Ashleigh noted previous success working with the Northwest Industrial Resource Center (NWIRC) on projects such as Lean Value Stream Mapping and implementation of a new accounting system, “so having them help us identify a qualified engineering student through their STEM Internship program was a natural next step.” Onex was looking for an electrical engineering student intern to work on specific projects involving programming of controllers that operate the furnaces.

Gretchen Reinar, Program Coordinator for the STEM Manufacturing Internship, worked with Onex Human Resources Manager, Debi Baacke, to develop a detailed job description and qualifications for the ideal candidate to do the work. Reinar started by delving into her database of hundreds of students who applied for internships via the NWIRC website and resumes she collected at various college career fairs. Students who closely matched the qualifications were passed on to Onex for vetting via their typical interview process.

Jacob Foglia, a senior electrical engineering student from Penn State Behrend, was chosen to work on specific projects involving programming controllers which operate various functions of the furnaces, including opening and closing doors and firing the burners. “Jacob was able to unlock applications in the controls that we didn’t even know existed. He took our basic training and expanded much further on what could be accomplished,” Ashleigh said.

His responsibilities involved review of programming for the Allen Bradley and Honeywell products used and implementing improved technologies into electrical panels.
He also created training materials for new hires and client specific training manuals. “NWIRC found us a candidate that exactly matched the profile we were looking for, including the programming skills needed for the job,” she said. “It’s really tough to find a good match like that and the process takes a lot of time.” While finding the perfect candidate for the project was most critical, Ashleigh acknowledged that having the NWIRC as a resource and providing a mini-grant to make the intern wages more affordable, helped the company move these projects forward. According to Ashleigh, Foglia worked on projects worth $3 million in revenue and could have cost the company upwards of $100,000 had they outsourced this work. “We were able to give a student some real-life experience that, at the same time, resulted in project completion that is useful to our business growth,” she said. NWIRC President, Bob Zaruta, said it’s projects like this that help companies grow and stay competitive. “At NWIRC, we measure success by the financial impact and return on investment for our client’s business. Cost savings, cost avoidance, and increased revenues are some of the key factors,” he said.

The results of having an intern complete this work is expected to have a significant impact over the next 12 months, with a projected sales increase of approximately $500,000 and additional costs savings of $20,500+, just in labor and other overhead. Onex also hopes to create 3 new jobs as a result of this project work.

RoboBOTS are Back in Action

It’s common knowledge that metalworking and manufacturing companies in our region face a shortage of skilled workers. We know that many local organizations, including the workforce investment boards, universities and tech schools work hard to help address this skills gap. In addition, many organizations have been providing curriculum support, serving as school advisors and providing tours to students expressing interest in manufacturing careers. While there are good programs at the secondary, post-secondary and apprenticeship level to enroll motivated youth, the Northwestern PA Chapter of the NTMA (National Tooling & Machining Association) has invested considerably in a program to interest and recruit bright young students to technology and manufacturing career paths. It’s called RoboBOTS!

During the 2016-2017 school year, NTMA is celebrating 11 years of bringing this combat robot building program to community schools! Over the past 10 years, we have seen 2,010 student participants and 13,500 event spectators. Ninety-five percent of participants agree that RoboBOTS raised their awareness of manufacturing and technical careers and 85% acknowledge their plan to further investigate education in a technical field.

The competition event for this season is planned for April 1, 2017 at Meadville High School, but the work begins now in area classrooms with students designing, testing, procuring materials and building their robots. Their hard work is showcased at the exciting, double elimination combat tournament held in the spring.

Schools planning to participate at the April 1, 2017 competition are from Erie, Crawford, Venango and Mercer counties. Each year, the bulk of the funds needed to operate this program are generated from sponsors and businesses. The NTMA is always working to obtain grant money from sources such as the Partners for Performance, and the PA Department of Community and Economic Development, however we know we cannot rely on those resources long term. Several NTMA member companies have already committed financial support for RoboBOTS this year, but would like other companies to join the effort. Companies interested in sponsorship or getting involved can contact Tami Adams, NWPA Chapter NTMA (tadams@nwpa-ntma.com or call 814-720-0094).

Any financial support will be acknowledged appropriately through printed programs, promotional media, team t-shirts, robot decals, banners, and other arena signage.

For more information about the RoboBOTS program, video of the event, and results from last year’s competition, visit www.metalsinmotion.org/robobots.php.

Lean Together™

A new working group for operational excellence is now forming to begin January 17th. Find more info at nwirc.org/lean-together.
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  
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Crawford, Forest, Mercer & Venango Counties

Ed Barthelmes  
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Erie & Warren Counties

UPCOMING EVENTS

ISO 9001:2015 Internal Audit  
January 17-19  
Location: Erie  
This 3-day workshop will provide a detailed review of the quality standard, including the most recent changes. Participants will learn how to conduct an internal audit, write the audit report, take corrective actions, and more.

LinkedIn for Manufacturers  
February 23  
Location: Erie  
March 1  
Location: Clarion  
Hands-on workshop to create the ideal profile and target new connections. Learn how to share useful information, generate leads, keep tabs on your industry, and use this powerful network as a sales and marketing tool. This is a great session for senior leadership.

Apply Six Sigma Tools Now for Big Results  
February 22  
Location: Erie  
Small organizations may not have the resources (time, people, and money) for Six Sigma and the training required. Learn how to leverage basic elements of the DMAIC (Define, Measure, Analyze, Improve, and Control) methodology of Six Sigma without significant investments and bearing the expense of training belts.

ISO/TS 16949 Internal Audit  
March 21-23  
Location: St Marys  
ISO/TS 16949 is the quality management system standard for companies working within the automotive industry. If you are certified or looking to become certified, this course provides a thorough review, instructs participants how to conduct an internal audit, and more.

Happy New Year!
We look forward to working with you in 2017.