

WINTER 2016

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INSIGHTS

ON THE COVER: PLANT LAYOUT DESIGN PLANS HELP MANUFACTURERS GO LEAN.

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PRESIDENT'S MESSAGE: LOOKING AHEAD—2016 AND BEYOND

BY BEN RAND



AS 2016 OPENS, WHAT SHOULD WNY MANUFACTURERS EXPECT FOR THE COMING YEAR AND BEYOND?

We have our own unique set of circumstances here that will heavily influence our 2016. Like politics, economics can also be local, and in WNY we have benefitted from a huge infusion of cash, energy and optimism otherwise known as the “Buffalo Billion.” It does not require a detailed macroeconomic analysis to conclude that pumping \$1 billion into a five-county area will be good for that economy, at least in the short term. The key question is: Can that initial success be sustained? Will the Governor’s bold move cause a chain reaction of growth and development that continues long after the initial expenditures have been made?

If sustainability is the goal, it is reasonable to look at the Buffalo Billion’s effect on manufacturing, our largest tradable sector.

Critics might point to SolarCity, the largest and most

visible investment made by the Buffalo Billion, and claim it is risky—a large bet on a single company and industry that is heavily reliant on federal subsidies and tax breaks. Certainly, SolarCity is no silver bullet and the Buffalo Billion has wisely been invested in multiple initiatives that will benefit our area for years, regardless of SolarCity’s success. Buffalo Manufacturing Works, for instance, is already bringing cutting-edge technologies to existing WNY manufacturers of all kinds, offering them an opportunity to dramatically improve their competitiveness to world-class levels. The Workforce Development Training Center, slated to open on Northlands Avenue, has the potential to take a big bite out of WNY manufacturers’ biggest challenge: finding skilled and reliable workers.

Beyond manufacturing, the 43North business-plan competition has created an energetic, vibrant WNY entrepreneurial scene that can become a

new engine of growth. In only two years, 43North has garnered international attention and attracted dozens of promising startups with the potential to invigorate our economy for years to come. Inspired by 43North, more and more of our young people have begun to realize that they don’t need someone else to give them a job; they can make their own dream job by starting a company. This thought alone would represent a tectonic shift in WNY’s thinking, attitude and culture that could fundamentally alter our future for the good.

So, while the economy may wobble and the stock markets will rollercoaster, here in WNY our long-term future is the brightest it’s been in decades. We will have setbacks, downturns and even failures, but you cannot reverse decades-long trends without risking failures. So here is my prediction: WNY’s upward trajectory will continue, reversing decades of decline, thanks in large part to the Buffalo Billion.

CASE STUDY: ARTONE LLC

COMPANY Artone LLC is a manufacturer of commercial furniture and displays for the hospitality, retail, healthcare and contract furniture markets. Customers include the Seneca Casinos, DSW Inc., Microtel, Kroger Supermarkets and Disney Animal Kingdom.

SITUATION After a severe business downturn in 2009, the company’s sales rebounded strongly over the next several years. It quickly became apparent that the layout and physical limitations of the company’s original 60,000-square-foot manufacturing site would not support their growth. An existing 250,000-square-foot, single-level facility that better fit the company’s long-term needs was found. Management also recognized that developing an effective layout was critical to ensuring their continued growth and increased profitability.

SOLUTION Insyte Consulting was engaged to work with Artone’s team to develop the optimal layout and workflow for the new facility. The first step was to analyze the product mix, both current and projected. Based on these anticipated volumes, several high-level, block layout diagrams were developed for consideration by the group. Once a consensus was reached, Insyte developed a detailed layout to provide the optimal workflow for both current needs and continued long-term growth. The additional space and growing revenues enabled Artone to invest in additional production equipment, allowing them to increase their product offerings. The Cooltree™ line for the healthcare market was introduced and a steel chair product line was acquired. Purchased with the steel chair line was their manufacturing process that gives the appearance of wood with the strength of steel. Artone also realized significant cost savings due to the elimination of off-site warehousing, as well as improved logistics and material handling. Finally, the new facility enhanced Artone’s image with prospective customers touring the site.

THE RESULTS



15% FIRST YEAR
REVENUE GROWTH
AFTER RELOCATION.



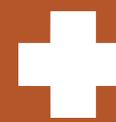
\$600K EQUIPMENT
INVESTMENT.



\$150K ANNUAL
COST SAVINGS.



NEW PRODUCT
LINE ACQUIRED.



ACCESS TO HEALTH
CARE MARKET.

“The facility layout developed by Insyte Consulting has enabled us to accelerate our growth and access new markets while simultaneously receiving significant improvements in efficiency and cost reduction.”

— MIKE CALMIERI, PRESIDENT

EMPLOYEE PROFILE—JIM JOHNSON



In this issue of Insights, we talk with Jim Johnson about industrial engineering. With years of experience on the Insyte team, Jim has long been dedicated to helping area manufacturers improve their operations through instilling Lean practices and other modes of efficiency. Here, he discusses the role he plays on the Insyte team, with his clients and in the region's manufacturing community.

Tell me what an industrial engineer does.

It's not as simple an answer as you might think. An industrial engineer is a person who looks at a system—and that system could be a manufacturing process, a machining process; it could be a full assembly line; it could be an order entry process from a manufacturing standpoint—they look at that process or that system and analyze it to try to make it run better. We're trying to make businesses run more efficiently, and make them more profitable, to be honest with you.

Can you discuss, using a hypothetical scenario, what's involved in one of your projects?

One of our clients made a decision to relocate their manufacturing facilities from a rather cramped space to a larger facility. My role was to take a look at how they had been doing things, where the equipment is, for example, and with a clean sheet of paper, determine where it should be, with the idea that we want to make things a lot more effective.

We want to reduce the handling, the storage of the material; we only want to touch it once and then get it on its way. And we looked into different alternatives to do that, but we finally came up with a consensus on which was best suited to their needs.

Despite our best efforts, sometimes our work becomes inefficient over time. Why do you think that is?

I think people start off with the most efficient way to do things, and then additional responsibilities, additional things get added. For the client I mentioned, when they started, they put their machines in a line, so the sequences were A, B, C and D. Well, after time and the growth of their business, they expanded into other areas; they had to get more machines to actually produce the product for those areas, and they basically put it where they could. So what was common to them—moving materials from point A to point B within their current facility—over time was about doing the best they could with what they had. So when they moved into a new facility, we had the opportunity to say, "All right, how should this be?" And I think that's where someone coming in from the outside, with a separate set of eyes, can help.

A common misconception—well, it's more of an excuse, let's say—is "it's the way we've always done things." Workers may understand that there's a better way to do it, but at a certain point, they may not have the time or the sense of urgency to fix it.

Do you find there is fear within a team or organization to change what they're doing?

Yes. I wouldn't use the word "fear," but there's reluctance. When I'm talking to clients, I try not to use the word "change"; I try to use the word "improve." So I'll say, "How can we improve this system? Or this process? We want to reduce the scrap." Well, in order to improve anything, intuitively, you're going to have to change something in the process. I get them to think about improving things, rather than changing things. That kind of breaks down some of the barriers for people, who will say, "Yeah, that makes sense, I think I'd like to improve this. All right." It gets them thinking about how they can do things a little bit differently to improve the outcome.

Why do you like working with the Insyte team?

We are all focused on insuring that the client gets what they paid for, and there are some measurable impacts at the end of the engagement. What we say, and what everyone at Insyte really believes in is what's in the best interest of the client, and the mission of growing companies, small manufacturing companies here in WNY—that's what we really believe in. If we can be a small part of making a particular company more profitable, well, we know it's going to help everybody.

GOING LEAN WITH PLANT LAYOUT DESIGN BY JIM JOHNSON

One of the often overlooked and underutilized tools in the Lean Manufacturing toolbox is plant layout or facility design. This initiative isn't typically considered until a company goes through an expansion, relocation or major rearrangement, prompted by circumstances such as equipment purchase, new product line offering or the urgent need to increase efficiency.

Most companies start out with a nice and efficient layout, but over time either expand, add or delete products, add equipment, add storage capabilities or accumulate items that need to be placed somewhere within the facility. Through this process, employees get used to the arrangement and make concessions to the now inefficient layout.

In good Lean practice, we always want to reduce or eliminate waste. Inefficient layout leads to increased material handling, and the waste of time in transporting materials, which then leads to further waste in overproduction, waiting, excessive inventory and large batch sizes. The thinking is: "I don't want to move less than a pallet load to the next process. I want to decrease my material handling."

With these changes, though, comes the consequence of waste.

To alleviate this, companies—even those without plans for expansion or relocation—should consider rearranging their workspace layout.

To plan for a rearrangement, expansion or relocation, we investigate a company's current situation using the P, Q, R, S, T approach:

- P** What are the **Product** lines (now and expected)?
- Q** What is the anticipated **Quantity** for each of these products?
- R** What are the **Routing** steps that these products take?
- S** What are the **Storage** requirements and methods for these products (including raw material, work in process and finished goods)?
- T** How are the materials **Transported** between operations, and what is the frequency of handling?

In addition, it is important to look at the activity

of the relationships, between operations and/or departments to determine which areas need to be near each other and which do not, or should not (e.g. for safety or environmental reasons).

Given all this information, we can then work with the company to provide various solutions that eliminate the wastes and increase efficiency and throughput. We then weigh the pros and cons of each potential solution to ultimately reach the best plan for the future.

When incorporating a new plant layout, companies should also take advantage of the opportunity to utilize other lean tools, such as 5S, visual management, batch size reduction, point-of-use storage, limited inventory (Kanban) and cellular flow. These can help to further enhance the improved efficiency, and reduce or eliminate pesky wastes.

Keep in mind that this approach to proper layout is not only used on the shop floor. It can be adapted to any system that involves providing a product or service to an end user, such as an office environment, distribution center, hospital or retail center.

RECENT PROJECTS

A SAMPLE OF PROJECTS THAT INSYTE RECENTLY CONCLUDED WITH WNY COMPANIES:

- Used value stream mapping and lean principles to identify and eliminate wastes from order processing through production for a Niagara County chemical manufacturer.
- Facilitated off-site strategic planning sessions for a Buffalo metal fabricator to create a business development plan for establishing new product offerings, new market identification, and new customer targets using existing and improved capabilities.
- Prepared a Chautauqua County electroplater for a surveillance audit to ensure recertification to the AS9100 (Rev C) standard.
- Aligned a Buffalo automotive parts supplier's marketing message across all its marketing materials and its website.
- Provided lean-office training to a large Erie County aerospace manufacturer to help them improve the workflows in their supply chain contracting process.
- Upgraded an Erie County packaging manufacturer's quality system to meet a key customer's requirements for process control, validation and quality requirements.
- Provided root cause analysis and problem-solving training to selected members of the workforce for a Buffalo manufacturer of heating and cooling components. The trained employees will provide project management leadership for a lean Six Sigma implementation.
- Developed and delivered Design of Experiments training to selected workforce members of an Erie County producer of gases. The training gave the participants a "toolbox" from which to choose appropriate statistical tools for problem solving.
- Defined desired future state business workflows for a Chautauqua County storage equipment manufacturer as part of a project to develop a Request for Quote (RFQ) for a new ERP system.
- Provided back injury prevention and safe lifting training to the employees of a regional hospital to prevent musculoskeletal injuries.
- Supported an Erie County packaging manufacturer's business growth objectives by identifying new markets and applications for current products and targeted prospects for new products.

EVENTS

APRIL	6 & 7	8:00 A.M.
WNY SAFETY CONFERENCE		3:30 P.M.
- TO -		
INSYTE-CONSULTING.COM/CALENDAR		

MAY	11	7:30 A.M.
WNY VENTURE ASSOCIATION - COMPANY PRESENTATION FORUM		9:00 A.M.
- TO -		
INSYTE-CONSULTING.COM/CALENDAR		

MAY	11	8:00 A.M.
PRINCIPLES OF LEAN MANUFACTURING WORKSHOP		4:30 P.M.
- TO -		
INSYTE-CONSULTING.COM/CALENDAR		

A black and white photograph of a desk with a rotary telephone, a pen, a stack of papers, and a typewriter. The text is overlaid on the right side of the image.

**IF YOU WANT
SOMETHING NEW,
YOU HAVE TO
STOP DOING
SOMETHING OLD.**

Peter Drucker