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Win an iPod  
with video  
...See insert

## Marketing Assistance Spurs 17% Increase in Sales for ATECH-SEH

**A**TECH-S.E.H. Metal Fabricators, Inc. (ATECH) is a contract metal fabricator specializing in the precision fabrication and manufacture of steel, aluminum, brass, and plastic production parts. Located in Buffalo NY, the company currently employs approximately 25 people. ATECH serves customers in a number of industries including medical equipment, telecommunication equipment, computer networking equipment, industrial controls and commercial products.

### Situation

David Munschauer, President, wanted to grow his business and customer base. ATECH was dependent on a relatively small, yet loyal customer base for most of its sales, and those businesses were experiencing greater pressure to reduce prices. Also, revenues were not growing at the rate necessary to justify investments in new equipment.



James Mackowiak, Lead Man, loads ATECH's new laser cutting machinery with material.

The president sought to add new customers in order to utilize increased production capacity that resulted from implementation of lean manufacturing, and to concurrently reduce the risk of dependence on his existing customers. The primary concerns were how to

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## Developing Supplier Relationships

by John Rocco

**T**o be successful in today's new supply chain environment, far greater collaboration between trading partners is needed on critical strategic decisions. Suppliers can influence product development costs, inventory levels, manufacturing schedules and the timeliness of delivery of goods and services and ultimately have a significant effect on performance and profitability. Even where organizations recognize that effective supplier relationships can help improve financial performance and customer satisfaction, many of them have no concept of how to manage their own supply base and how to build effective supplier relationships to impact the bottom line.

Supply chains need to be both effective and efficient to encourage chain-wide excellence. Are suppliers expected to achieve efficiency and effectiveness on their own, or must they be developed to be the right kind of supplier, and should this development come from the customer? The development of a supplier can be initiated in many different ways, and is not always the direct result of poor performance. In many cases, suppliers that are determined to be key or critical to the customers business will be chosen for development. In other cases, a supplier may request to participate

Supplier Relationships continued on page 5

## A Crisis in U.S. Education

There is a crisis in U.S. education that affects our global competitiveness... actually there are two crises. The first, the lack of engineering and science graduates, is well publicized. The second, the poor education of our blue collar workforce, is just beginning to receive the attention it deserves. In our community, blue collar jobs provide high paying employment for tens of thousands. Actually, blue collar is no longer an appropriate description for most manufacturing environments; some manufacturing facilities are cleaner than hospitals. Tragically, much of our workforce is poorly prepared for success in these new environments where reading, basic mathematics, communication and computer applications are critical. The key to a good workforce preparation is an educational system that develops the ability to respond to the changing nature of work and stimulates an appreciation for life-long learning.

Our community heavily invests in education at all levels including the active workforce. We often invest multiple times with poor results. It is not unusual for an employer to invest in basic reading and math training for employees that have already been educated in our schools and provided additional training through a workforce development program. More funds are not needed. We need to educate our children well the first time; remediation is as wasteful as product rework in a manufacturing environment. The root cause of our education failure seems to be the structure and alignment of our educational system, including outdated curricula, unqualified or inexperienced teachers and low expectations for some students.

As a community we need to focus on education as a community opportunity. We need to start in the home, but the home learning environment is difficult to influence because it is closely linked to socio-economic factors. We have a chicken and egg situation... educational success is linked to socio-economic conditions and good paying jobs are linked to educational success. Although influencing the home environment is difficult, we do control the schools. Elementary schools must provide a good foundation for learning and basic skills development for all students. In middle school and high school, we need to continue basic skills development for all students as well as provide a quality program for students that chose a technical track. The technical track should have instructors, curricula and facilities that are aligned with opportunities for meaningful, post-graduation employment in our next generation companies. This means a solid basic education in reading and communication as well as a strong emphasis on math and computer applications.

Good community college programs are essential to our educational pipeline to good paying jobs. Since many community college students are already in the workforce, the alignment of the curricula with job opportunities is critical. However, with a few notable exceptions, the technical programs in our region's community colleges suffer from outdated curricula, unqualified teachers and out-dated facilities. I don't understand the reluctance of our taxpayers and community leaders to address the inadequacies of our community colleges. Of all the post-secondary educational programs, community colleges are the most important, because their graduates typically continue to live and work in our community.

The state and the federal governments provide tens of millions of dollars to provide basic pre-employment training and advanced skills development for the employees of local companies. The pre-employment training compensates for the failures of our schools to provide good basic education (wasteful rework); the advanced skills development training helps employees stay up to date on technical advances and modern business practices. If we improve our schools, we will be able to focus our workforce development investments on advanced skills development training rather than remediation.

Our local employers invest both cash and opportunity costs in training which increases their cost of production. If these investments do not increase the value of their products and services, they are less competitive in the global marketplace. To help companies improve their hiring and training practices, efforts are underway to provide national certifications for workforce training. The Manufacturing Skill Standards Council (MSSC) Training, Assessment and Credentialing System is an example. Certification aligns training with well defined curricula and certifies an employee's competence. In addition to helping prospective employers, it provides employees with greater employment mobility. If certification programs are accepted by employers nationally, they may offer some interesting benefits for both employers and employees.

The future of our community is closely linked to the success of our schools and training programs. More importantly, schools determine the future potential for our children. They need our attention.

*Robert J. Martin*

## IEP Funds Improvement Initiatives

For over twenty years the Industrial Effectiveness Program (IEP) has been helping New York State's manufacturing companies to become more globally competitive. The program is designed to reimburse manufacturers for out-of-pocket consulting expenses that introduce improvement initiatives into the company.

### Funding Criteria

The IEP is a participatory grant that reimburses consulting expenses based on company size as follows:

- For less than 25 employees, 2/3 is reimbursed up to a maximum of \$25,000.
- The 2/3 reimbursement increases to \$40,000 for companies of 25-100 employees.
- Companies of more than 100 people can receive 50% reimbursement with a maximum of \$50,000.
- In all cases the reimbursement is based on a rate of \$80 per hour.

This funding opportunity can be used for a wide array of improvement initiatives within the manufacturing, support or management areas. Typical projects may include strategic planning, quality systems, lean manufacturing, human resources, marketing, supply chain management, information technology, safety etc. Multiple activities may be covered under a single grant.

### Funding Process

The process for obtaining this funding is also relatively simple. The first step is a brief qualification which describes the competitive issues and evaluates the company's basic financial position. This can normally be done within one day. The next step requires an assessment of the company's business within its major functional areas. Based on the assessment findings the company may then apply to address the issues and recommendations that were cited in the final report.

The state has a standard application, which is comprehensive but not difficult to complete. The completed application is submitted to the local office of Empire State Development for initial review prior to it being forwarded to Albany for final review and approval. While the complete approval process typically takes 6-8 weeks, the company is allowed to begin work at their own risk immediately after the initial, local review.

The IEP grant is particularly appealing due to the variety of improvements that can be addressed within a single application. Furthermore, it is an excellent funding alternative since the recent expiration of Department of Labor funding. Insyte Consulting has administered the IEP grant since its inception and is very familiar with the application process. If interested, please call 716-636-3626 to see if there are opportunities for your company. ❖

## Economic Indicators

International Measure	Previous Year	Last Month/Quarter	Current Month/Quarter
<b>Trade Balance</b> - Trade with World, seasonally adjusted, in millions of U.S. dollars	— 69,440 — 9/05	— 73,214 — 8/06	— 68,505 — 9/06
<b>National Measures</b>			
<b>Gross Domestic Product</b> - Current dollars and "real" Gross Domestic Product (seasonally adjusted annual rates) in billions of chained 2000 dollars	11,163.8 — 4th qtr 2005	11,388.1 — 2nd qtr 2006	11,450.5 — 3rd qtr 2006
<b>Producer Price Index (PPI)</b> - by stage of processing, seasonally adjusted, Durable Goods	137.2 — 5/06	137.0 — 9/06	134.3 — 10/06
<b>Manufacturing Employment</b> - all employees, thousands	14,196 — 10/05	14,220 (p) — 9/06	14,181 (p) — 10/06
<b>Productivity</b> - Manufacturing output per hour, at annual rate, % change qtr. ago	3.7% — 3rd qtr 2005	2.7% — 2nd qtr 2006	6.7% — 3rd qtr 2006
<b>Wages</b> - Manufacturing average hourly earnings of production workers, seasonally adjusted	\$16.71 — 10/05	\$16.86 (p) — 9/06	\$16.92 (p) — 10/06
<b>Manufacturing Sentiment</b> - National Purchasing Managers Index (PMI)	55.6 — 12/05	51.2 — 10/06	49.5 — 11/06
<b>Prime Rate</b> - Bank prime loan rate	7.00 — 11/05	8.25 — 10/06	8.25 — 11/06
<b>Local Manufacturing Measures</b>			
<b>Employment</b> - Buffalo-Niagara Falls, NY Manufacturing employment in thousands, not seasonally adjusted	63.6 — 10/05	62.2 — 9/06	61.6 — 10/06
<b>Manufacturing Sentiment</b> - Buffalo Purchasing Managers Index	52.0 — 10/05	54.9 — 9/06	56.6 — 10/06

P: preliminary, Sources: U.S. Census Bureau, Bureau of Economic Analysis, Bureau of Labor Statistics, Institute for Supply Chain Management, Federal Reserve, New York State Department of Labor, National Association of Purchasing Management - Buffalo Inc.

## Understanding the Phases of Six Sigma - Part 3: Analyze by Steve Diloia

We continue our five part series on Six Sigma by looking at the 'Analyze' phase. Previous articles have discussed the "Define" and 'Measure' phases in our quest to answer the questions, "Why are we thinking of using Six Sigma? How or when should we use it? What will our ROI be when using it?" (Prior articles may be found at [www.insyte-consulting.com/news.aspx](http://www.insyte-consulting.com/news.aspx)).

### Introduction

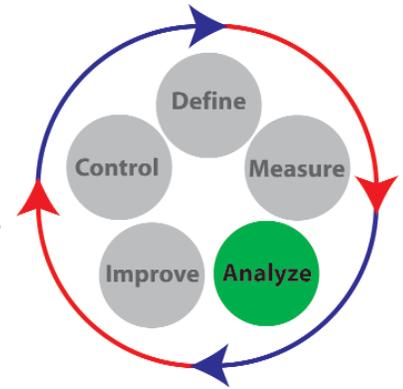
If in the last article, 'Measure' was considered the critical phase, then the 'Analyze' phase is the heart of the project. The Analyze phase identifies and verifies the critical inputs that affect the key outputs to the process, project, or system being studied. In this phase data is systematically collected and analyzed to determine the significance of the inputs on the outputs.

### Do you have a plan for Analysis?

As stated above, the data that is collected is gathered systematically. In writing this article I checked the synonyms for systematically. They are: methodically, thoroughly, steadily, analytically, and scientifically. It is important to emphasize this point for it is the key to effective problem solving (Six Sigma Methodology). Most problem solving is done with passive collection of data. The data is usually historical or what is currently coming from the system under investigation. This approach may not represent the current state or an unknown anomaly occurring at that moment.

There must be a plan for collecting the data, under controlled conditions, to understand, analyze, and interpret the data cor-

rectly. While there are a variety of tools used at this phase, the most powerful, in my opinion, is the DOE (Design of Experiments). By setting up the DOE, a systematic plan is created for turning on and off inputs while collecting data on the out-



puts. This allows you to not only see if the inputs themselves affect the outputs; but if there is an interaction between the inputs. The easiest way to view this is through an example. Figure 1 is a matrix to see the effects of volume and pressure on weight from a simple system.

As the system is run, the inputs of volume and pressure are changed according to the matrix and the resulting weight is recorded.

This data is statistically analyzed to determine if volume, pressure, or the interaction of volume and pressure have an effect on weight. It is this analysis that can pinpoint the areas for improvement.

### Conclusion

This has been a very brief explanation of the Analyze phase and the one tool, DOE, which is basic to most Six Sigma projects. Understanding and using DOE takes training and experience to utilize it effectively. When used effectively, an organization can gain understanding into its processes or systems that it would not have thought possible. This can result in increased productivity and decreased costs. Based on this understanding the next phase of the project, 'Improve,' can begin.

We will explore the 'Improve' phase in the next issue of the Affiliate News. If this series is convincing you to start your Six Sigma Project; but you are not sure where to begin, contact us at 716.636.3626 for further information on how Insyte Consulting can assist you in implementing Six Sigma.

*Steven Diloia is a manufacturing consultant with Insyte Consulting. Steve was trained and certified through Motorola as a Six Sigma Black Belt and certified through SixSigma.US as a Master Black Belt. ❖*

**The Analyze phase identifies and verifies the critical inputs that affect the key outputs to the process, project, or system being studied...**

Figure 1

Volume	Pressure	Weight Results
High	High	
Low	High	
High	Low	
Low	Low	

Supplier Relationships continued from page 1

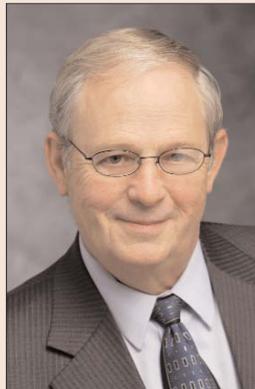
in a development activity. However this comes about, there is typically training in such subjects as lean manufacturing techniques and Six Sigma that are focused on driving costs out of the manufacturing process. While larger companies with more resources may be at a distinct advantage, small - and mid-sized companies can work with local organizations like manufacturing extension partnerships (ex. Insyte Consulting). Cost, quality problems and inflexibility — the common enemy — are the direct results of a shared process. Effective Supplier Development requires suppliers and customers to share technology, share risk, share benefits and share accountability.

An important, and often overlooked portion of the supplier development activity, is the relationship building process. What needs to be kept in perspective is the reason for supplier relationship management, and profit maximization needs to be the main focus of that effort. A profitable supply chain is a happy supply chain, which is ultimately a successful supply chain.

There are several critical phases of a successful supply relationship management program and they include: the integration and connectivity of Information Technology; collaboration, respect and trust; and synchronization.

## Information Technology

Integration and connectivity of IT are important aspects of an effectively managed supply chain and will be discussed in detail in a future article. What should be noted, however, is the important relationship these aspects have to a successful Supply Relationship Management program. As supply chains become longer and more complex, it is even more vital to leverage the opportunities arising from new, enabling technologies that permit real-time sharing of information up and down the supply chain.



## David English Joins Insyte

**David English** joins Insyte Consulting with more than 25 years of manufacturing experience in operations management and quality initiatives. He has been a leader in team building, culture change, process improvement, cost reduction, quality systems and ISO implementation, with extensive compliance experience in ISO and cGMP-FDA, including ISO 13485 inspections in the medical device & pharmaceutical/drug industries. Dave is a Fellow for UB's Center for Entrepreneurial Leadership.

## Collaboration, Respect & Trust

A culture of collaboration must be fostered across the supply chain, and suppliers must be viewed as a competitive advantage, rather than a cost. This involves treating your suppliers much like you would treat your employees, with respect and dignity while continually challenging them to do better and helping them to achieve it. Jeffery Liker, author of *'The Toyota Way'* describes the five levels of how Toyota treats its suppliers:

- Fair and Honorable Business Relations
- Stable, Reliable Processes
- Clear Expectations
- Enabling Systems
- Learning Enterprise

Lack or misuse of trust in any supply chain relationship can have negative externalities on the entire supply chain, quickly leading to a loss of communication and collaboration ultimately effecting competitiveness and market share. Because trading partners in a supply chain are typically chosen for their specific core competencies, a supply chain is typically a mix of different size companies at different points in their life cycles with various cultures, policies and organizational behaviors. A misunderstanding of these differences can quickly lead to distrust. Remember, trust is a learned response between people, not entities.

## Synchronization

As defined by APICS, a synchronized sup-

ply and demand is characterized by all relevant trading partner information, decisions, and related activities occurring simultaneously to satisfy the demands of the other partners and the end customer. This involves a smooth and efficient supply of the right kind and amount of product and service from the suppliers right through to the end customers. Benefits of synchronization can have a significant impact on reducing inventory and capacity buffers in the supply chain resulting in improved efficiency, lead time reduction and increased inventory turns.

Even the most progressive companies are continually challenged to improve. As with any dynamic environment, what was class-leading performance can quickly become yesterday's news. Supply chains must be willing to raise the bar on performance expectations and do the hard work to meet those expectations.

Insyte Consulting can assist you with your supply chain development decisions. Contact us at 716.636.3626 for more information. A future issue will focus on the role of Information Technology in Supply Chain Management.

*John Rocco is a manufacturing consultant with Insyte Consulting. John is certified by APICS as a Supply Chain Professional (CSCP) and in Production & Inventory Management (CPIM). John is also certified in Logistics, Transportation & Management (NU-LTM). ❖*

## Diversifying Your Contract Manufacturing Business by Selling Your Own Products by Robert Kosobucki

Unfortunately the trend in outsourcing is often to source from outside the U.S., leaving many U.S. contract manufacturers with excess capacity. In the spirit of 'fixing the roof while the sun is shining' companies with a successful contract manufacturing business should consider diversifying by developing their own products while their revenues are still strong.

Having your own products versus exclusively building customer designs has the advantages of:

- More difficult for customers to source it elsewhere
- Less price pressure
- Manufacturing trade secrets that are not evident in the product make it difficult to replicate
- Ownership of the design means that you can sell it to other customers

The table below describes some Pros and Cons of the alternatives for selling your own products.

ALTERNATIVE	PROS	CONS
Sell a pass-through product	<ul style="list-style-type: none"> <li>• Minimum investment</li> <li>• Fast market entry</li> <li>• Customers may already exist</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum differentiation in market</li> <li>• Not easy to make product changes</li> <li>• Supply may be discontinued</li> <li>• Limited gross margin</li> </ul>
Acquire product or business line	<ul style="list-style-type: none"> <li>• Immediate revenues</li> <li>• Minimum investment in creating customers and a sales channel</li> <li>• May permit hiring of trained technical, sales and manufacturing personnel</li> <li>• Established position in market</li> </ul>	<ul style="list-style-type: none"> <li>• Requires significant upfront capital</li> <li>• Possible hidden issues with product, technology, manufacturing, customers, competition</li> </ul>
Replicate product on market	<ul style="list-style-type: none"> <li>• Relatively fast market entry</li> <li>• Relatively less cost than product line acquisition or developing completely new product</li> </ul>	<ul style="list-style-type: none"> <li>• Concerns about violating patents or other intellectual property rights</li> <li>• Investment in engineering and market development</li> <li>• Existing competitors can make market entry difficult</li> </ul>
Develop a completely new product	<ul style="list-style-type: none"> <li>• Full control over product design</li> <li>• Ability to take larger market share with a 'better' product</li> <li>• Products, intellectual property and customer base become business assets</li> </ul>	<ul style="list-style-type: none"> <li>• Significant investment in engineering and market development</li> <li>• Time to develop new customers and see revenues</li> <li>• Higher probability of false starts and mistakes</li> </ul>

Selling one's own product is a major strategic decision for a company. Some of the risk can be reduced by relying on partners to share the sales and marketing burden. For example, products can be sold under your customer's name (private labeling). Or, the product can be co-labeled (Manufactured for XYZ Company by MyCompany). Becoming known in the marketplace as the supplier of certain types of products is known as branding. Branding is possible for even small company budgets because it does not necessitate advertising. However, it does require a clear articulation of product positioning. A brand name can accelerate the generation of revenues from future new products because people buy on the basis of brand reputation. A strong brand reputation especially helps where marketing occurs by word-of-mouth.

Insyte Consulting can help companies to develop ideas for new products and markets, to evaluate those alternatives, and to assist in developing new internal management processes for developing and selling new products.

*Robert Kosobucki is a marketing and product development consultant with Insyte Consulting. Bob has held the positions of VP of Engineering and VP of Sales & Marketing at two publically held technology companies. ❖*

Atech-SEH continued from page 1

compete more effectively and improve gross margins in the highly-competitive sheet metal fabrication business. Mr. Munschauer believed that adding laser cutting capability to the company's already extensive equipment capabilities would differentiate ATECH enough to win more new customers and better serve the needs of existing customers. However, the concerns were whether purchasing a laser cutting machine was financially justifiable, and whether the new cutting capability would enable ATECH to capture and better retain customers.

## Solution

Mr. Munschauer engaged an Insyte Consulting consultant with extensive marketing and sales experience to complete a tightly-focused Sales and Marketing Assistance project to investigate and make recommendations regarding his concerns. The approach involved assessing the opportunities and issues related to offering laser cutting services and then develop specific and measurable recommendations on how to market all of ATECH's capabilities within a limited marketing budget.

Insyte determined the geographic radius from which ATECH could draw customers, and then analyzed the capabilities and strategies of competitors with laser cutting equipment within that radius. The second element of the project was to review ATECH's current marketing and sales efforts, and then create prioritized, cost-effective actions for winning new customers.

The review of the targeted geographic area indicated that several competitors had laser cutting equipment similar to what ATECH was considering for purchase. However, more in-depth analysis revealed that the competitors' laser cutting equipment was not being used in the same market segments that ATECH served, but instead was being utilized to fabricate internal proprietary products. Consequently, ATECH could be confident that the other fabricators were not an immediate threat in ATECH's targeted markets. Insyte and ATECH also analyzed

potential new market segments and customers, and determined how market requirements would affect specifications on the laser cutting equipment. The analysis assured ATECH they had indeed specified the laser equipment correctly.

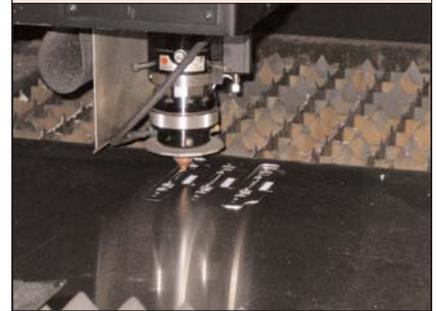
With confidence in laser capabilities solidified, the focus shifted to how to get more new business. Insyte investigated and analyzed customer buying criteria and the nature of the buying process as well as ATECH's capabilities and, based on the analysis, recommended changes in the company's marketing strategy. Historically ATECH relied on direct sales calls and word of mouth to attract customers. However, it was decided to develop a new marketing brochure to highlight the company's capabilities, commitment to quality, professionalism, and the diversity of industries served. Using a professional designer, a high-impact brochure was developed.

ATECH phased in Insyte's recommendations over several months and positive results have begun to occur. Key performance indicators show a 15% to 20% increase in sales to both new and existing customers. Order lead times have been reduced by approximately 20%, resulting in converting more quotes to orders, as well as a noticeable increase in the number of requests for quotes. In addition, the win rate on quotes has increased by about 20%. It has become clear that the laser equipment purchase, plus the new marketing brochure are what customers reacted favorably to. ATECH has become both more price competitive and more profitable.

Since installation of the new laser cutting equipment and adoption of the sales brochure, ATECH continues to gain new customers, increase sales, and penetrate new marketplaces. In the spirit of continuous improvement, ATECH continues to implement advanced lean management principles and techniques on the shop floor and in its business. ❖

## Firm Benefits

- 17% increase in sales
- 20% reduction in delivery lead time
- 20% increase in quotation wins



ATECH's Cincinnati laser cutting finely detailed small parts.

**“The market analysis gave us the confidence to make the significant investment in a laser cutting machine. As a result ATECH has enhanced its metal fabrication capabilities, become more cost efficient, increased its capacity, and increased its flexibility to make short notice design and production scheduling changes.”**

**David Munschauer,  
President**

# Affiliates News

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Insyte Consulting is a Western New York  
Technology Development Center, Inc. company.

This publication is funded in whole or in part by  
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Insyte Consulting assists WNY manufacturing and technology companies to overcome their strategic and tactical business challenges. Whether it's a short-term engagement or a long-term commitment, we create positive change.

Because our employees have hands-on experience, we can help our customers see the opportunities and threats that lie ahead. We're always ready to roll up our sleeves to help get results — results you can measure.

We also place a strong emphasis on teaching our customers proven methods for maintaining and replicating the success that has been achieved. Knowledge combined with common sense — that's how our experience improves your business.

## Our experience improves your business



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