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## Facility Consolidation Grows Revenue and Cash Flow

Too many facilities or too much production space can adversely impact product and company profitability. TMP improved its cash flow and the profitability of a unique product by analyzing the feasibility of consolidating its facilities and improving its production layout. The results show that companies need to look at many variables before making long-term decisions.

### About TMP Technologies Inc.

TMP Technologies Inc. (TMP) was founded in 1954 by a small group of entrepreneurs. The company manufactures fabricated high-precision foam assemblies for demanding applications in medical, electronics, industrial and consumer products. One of its key products is the Magic Eraser seen in many stores. At the start of this project the company had four facilities - two in Buffalo, one in Wyoming and one in Niagara Falls, each making a specific product line.

### Situation - Unprofitable Product Line

The company manufactured a foam product, with unique formulation and properties at its

Niagara Falls facility. This product appeared to offer significant growth potential despite representing only about 6% of the company's product mix.

TMP only used one-third of the amount of product produced for its own production needs, and sold the other two-thirds to other foam fabricators.



The product line was not profitable, so the company considered the following options:

- Drop the product line;
- Outsource the manufacture of the product under a licensing agreement; or
- Consolidate the foam production facility into one of its other locations to reduce overhead costs.

The first two approaches were quickly eliminated. The product line offered significant growth potential and the licensing approach raised intellectual property and quality concerns.

At this point TMP's senior management staff contacted Insyte Consulting to evaluate the feasibility of consolidating the Niagara Falls operations into one of the company's Buffalo facilities. The company previously worked with Insyte Consulting on several projects and was confident Insyte could help.

If consolidation was feasible, significant overhead costs (labor, lease expense, utilities and transportation) could be eliminated. Improved operations and control were also viewed as potential opportunities. There were specific concerns, however, whether the Buffalo fabrication facility had sufficient space to house its own production and the Niagara Falls' product line. The cost associated with the required physical changes was

Facility Consolidation continued on page 3

“

...The analysis and subsequent consolidation enabled us to convert a loss operation into a profitable one with substantial growth potential moving forward. This result would not have been successful without Insyte.”

Bob Laughlin, CFO



## The Case for Reshoring

by Benjamin Rand

**H**arry Moser is on a mission. The Chairman Emeritus of machine tool maker GF AgieCharmilles founded the Reshoring Initiative to bring back manufacturing work that was outsourced to other countries.

Moser contends that many American manufacturers that have outsourced manufacturing have been misled by an incomplete understanding of their costs. As a result, offshoring, at best, is less profitable than businesses believe and, at worst, is an outright money loser. A 2009 survey by Archstone Consulting agrees, concluding that 60% of manufacturers use "rudimentary total cost models" that ignore 20% or more of the cost of offshored manufacturing. Moser himself estimates that many companies consider as few as 4-5 cost factors before deciding to offshore.

The basis of the Reshoring Initiative is Total Cost of Ownership (TCO), defined as the full cost to an organization to off-shore the manufacturing of a product. This concept goes back at least as far as W. Edwards Deming, the quality guru, who advised companies to "end the practice of awarding business on the basis of price tag. Instead, minimize total cost." The Reshoring Initiative identifies 29 discrete cost factors for companies to consider ranging from the obvious - labor rates and shipping costs, to the subjective - the "political stability of the country" or the "impact on innovation of distance from manufacturing." These latter factors may be difficult to assess, but they are nonetheless real risks with real costs or potential costs for most offshored manufacturing. The Reshoring Initiative provides a free TCO Estimator on its website ([www.reshorenow.org](http://www.reshorenow.org)) that allows companies to consider and compare all 29 cost factors over multiple years to determine if offshoring really would provide the lowest TCO. Users can pick and choose which factors they will use, so if you don't feel the "political instability of the country" is an issue, or you are uncomfortable estimating it, you can simply skip that factor for purposes of your analysis.

Many companies are starting to agree with Moser, including General Electric Co., NCR Corporation, Olevia and Emerson. Even smaller manufacturers are reshoring. According to the Wall Street Journal, Farouk Systems, based in Houston, Texas, is reshoring manufacturing from Shenzhen-based Fenda Electrical Co. due, in part, to problems with knock-offs. Stories abound of quality problems with offshoring which can dramatically increase cost and delay delivery. I personally had a \$1.5 million offshoring problem when a filtration company I was running sourced what we believed was 316L stainless steel from a Chinese supplier. We received and tested samples before approving the supplier. But, when the steel began to dissolve in our customer's process, we learned that the quality certificates that accompanied each production shipment were fraudulent and the steel was not 316L.

Moser's crusade matters on many levels. Manufacturing is still essential to the economy of the United States. Many of the manufacturing jobs lost to offshoring could conceivably be reshored if companies considered their TCO carefully. Here in our area, the Reshoring Initiative matters for WNY manufacturers who are supplying OEMs, since the TCO Estimator may help those suppliers retain or regain business that would otherwise be mistakenly offshored by their OEMs. It matters to WNY manufacturers who are considering offshoring themselves and have not considered their true total cost of ownership.

"I won't stop until my Reshoring Initiative brings hundreds of thousands of jobs back to the U.S. and manufacturing becomes a career choice for the next generation," says Moser. No wonder he was inducted into IndustryWeek's Manufacturing Hall of Fame in 2010.

A handwritten signature in black ink that reads 'Ben Rand'.

TMP Technologies, Inc. continued from page 1

also a major concern. If the consolidation proved feasible from a cost perspective, the subsequent layout work and physical move needed to be completed within six months to coincide with the lease expiration at the Niagara Falls facility.

## Solution - Consolidation

The first phase confirmed the feasibility of relocating the Niagara Falls manufacturing operation into the Buffalo facility within six months. The analysis examined both technical and financial components. Technical components included physical space, product/quantity determination, material handling alternatives, inventory analysis (raw, work in process, finished goods) and storage alternatives. Financial components included lease payments, transportation, storage and personnel costs.

The second phase analyzed current work flow, historical and future product volumes, expected product mix and existing equipment to determine footprints. It also considered facility requirements (i.e. utilities, material flow and storage) necessary to incorporate the Niagara Falls operation into the Buffalo facility.

With this information, Insyte Consulting developed alternative high-level draft layouts based on projected volumes for the product lines and selected the optimal layout. A detailed layout of the consoli-

dated operation was completed, along with a project plan for the execution of the relocation before the Niagara Falls lease expired. This project plan included demolition of existing walls, construction of new rooms, elimination of some existing equipment, build up of inventory and implementation of new storage methods.

TMP successfully executed the project plan to complete the consolidation within the required time frame to eliminate the lease obligation in Niagara Falls, increase cash flow and capture all expected benefits quickly.

## The results - less than 2-year payback

Although significant capital expense was required to complete the consolidation, the payback for this investment was less than two years based on annual cost savings of \$130,000. Since the move, foam sales for this product have increased by 20% and the company now has strong growth expectations with several multi-national Fortune 100 companies. TMP has also experienced a number of operational benefits, including reduced chemical costs and improved efficiency in the Engineering and Purchasing functions through the elimination of an additional site.



## Firm Benefits

- \$75,000 annual lease expense eliminated
- \$55,000 annual facility expenses eliminated
- \$16,000 invested in capital improvements to modernize production
- 20% increase in foam sales due to improved cost structure
- Improved efficiency in Engineering and Purchasing Departments



## Got a Bottleneck in Your Front Office?

*It May be Time to Uncork it!*

**Call Insyte to discuss how we can bring you Results with Fast Payback.**

716-636-3626 or  
bshepard@insyte-consulting.com

### Message from the Chairman and President



Warren C. Johnson

2010 was a very good year for Insyte Consulting in several respects. First and foremost, our project work produced over \$86 million in benefits for our WNY clients from Niagara Falls to Olean, according to independent third-party surveys conducted for the United States Department of Commerce. Especially noteworthy in these challenging economic times are the almost 900 jobs that we saved or created, according to our clients. Since 2000, we have delivered over \$832 million in benefits, including over 6,000 jobs saved or created. That represents a return on investment of 31-to-1. Our documented impacts are presented on the facing page.

We had a strong year financially in 2010 with record high project revenues from 145 projects involving over 65 clients. 2010 also saw a continuation of positive investment performance for our affiliate, the TDC Foundation. As a result, our combined fund balance increased by almost \$150,000, providing additional resources for re-investment in the community and/or our on-going operations.

In addition to our project work, we continued to support entrepreneurship and innovation throughout our region. As the designated Small Business Innovation Research (SBIR) regional specialist, we worked with entrepreneurs and small companies to help bring over \$6 million in SBIR grants from the federal government to WNY in 2010 for development and commercialization of new technologies.

We also coordinate the Western New York Venture Association (WNYVA), which provides a forum for WNY entrepreneurs seeking private funding. The WNYVA has grown over 75% in the last two years, as has its affiliate the Buffalo Angels, which was accepted last year as a member of the Angel Capital Association, the trade association of leading angel investment groups. In the last two years, six companies secured funding via the WNYVA and/or the Buffalo Angels.

Finally, we continue to provide coaching and feedback to entrepreneurs and start-ups in our many capacities as coordinator of the WNYVA, the managing partner of the WNY Business Development Fund, a sponsor of Bright Forum (previously the Buffalo Niagara Investor & Entrepreneur High-tech Forum created by the New York State Center of Excellence in Bioinformatics and Life Sciences) and a coach for the University at Buffalo's Panasci Business Plan Competition (one of our teams, Graphene Devices, won the 2010 competition).

We cannot end our annual report without gratefully acknowledging our many community partners who help us daily to fulfill our mission "to transform our region by stimulating the growth and creation of dynamic companies to provide a superior standard of living for our residents." Particular standouts in 2010 include: National Grid, whose Manufacturing Productivity Program grants continue to provide valuable assistance to manufacturers pursuing sales growth and/or operational excellence; NYSERDA, which partnered with us to offer energy audits and incentives under its FOCUS program; and the Chautauqua County Industrial Development Agency, which faithfully supports and promotes the interests of Chautauqua manufacturers and other businesses.

*Warren Johnson*

Chairman



President

### Customer Impact

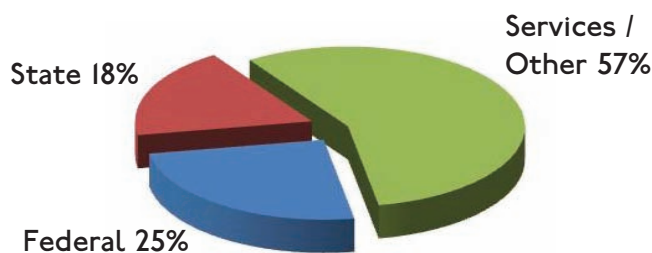
We evaluate our success by the impact we have on our customers. An independent study reported the following impacts in 2010 for customers surveyed\*:

\$29,369,048	Increased and retained sales
\$4,601,600	Cost savings realized
\$9,461,796	New investments in modernization
895	Jobs created and retained

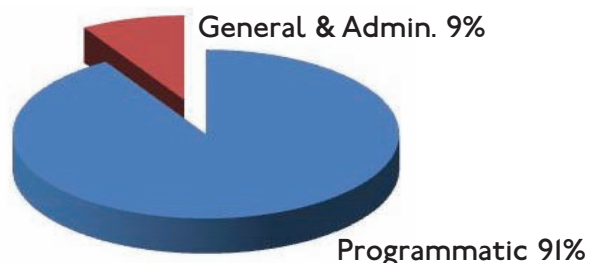
*\*Source: U.S. Dept. of Commerce*

### Insyte Consulting & TDC Foundation, Inc. Revenue & Expense Distribution 2010

Revenue \$2,485,813



Expenses \$2,340,175



### Insyte Consulting Board of Directors

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## WNY Companies Receive \$6.4 Million for Innovative R&D

Small businesses in the WNY region received more than \$6.4 million in 2010 through the U.S. Small Business Innovation Research (SBIR) and Small Business Technology Transfer Research (STTR) programs.

As detailed on the table on page 6, seventeen local companies received twenty-eight SBIR/STTR awards in 2010. Award amounts ranged from \$69,500 to \$750,000 and covered a wide range of technologies. The data in the table was compiled by Insyte Consulting from the websites of the eleven federal agencies that participate in SBIR/STTR.

The SBIR and STTR programs provide grants and contracts to U.S. businesses with 500 or fewer employees to conduct innovative research and development with strong commercialization potential. These programs awarded approximately \$2.5

billion nationwide in 2010. SBA has recently raised the award threshold amounts for SBIR to \$150,000 for Phase I and \$1,000,000 for Phase II. The limits for STTR remain at \$100,000 for Phase I and \$750,000 for Phase II.

Insyte Consulting is the NYSTAR-designated SBIR/STTR specialist for the Western New York and Finger Lakes regions. Insyte provides information and assistance to local companies including help identifying appropriate solicitations, coaching about proposal development, and commercialization assistance. Because of NYSTAR's financial support, there is no charge for this assistance. Contact us at 716.636.3626 for more information or to be added to our SBIR email information list.



### SBIR - Small Business Innovative Research Workshop Federal Agency Funding Available for Innovative Product Development

Over \$2.5 billion is awarded each year by the eleven US Federal Agencies to small companies, many of them startups or under 10 employees, for the purpose of developing innovative new products. Come to this free workshop to find out how you can gain access to those funds to develop innovative new technologies and products.

**Date:** Thursday, June 16th  
**Time:** 8:00 am Continental Breakfast  
8:30 am to 11:30 am Presentations  
**Cost:** Free of Charge, registration required  
**Location:** Barton Room, 6th Floor, Larkin at Exchange Bldg.  
726 Exchange St.; Buffalo, NY 14210

"This free 3-hour workshop will give attendees insight into the SBIR and STTR programs so that those interested can begin to effectively compete for project funding."

#### What You Will Learn:

- Overview of the SBIR and STTR programs,
- How individual entrepreneurs, existing small businesses & academic researchers can tap into these funds
- How to develop a winning proposal
- Hear local SBIR & STTR award winners talk about their experiences

#### Who Should Attend:

- Entrepreneurs wanting to start a business around a new technology product idea
- University researchers wanting to commercialize a technology
- Phase I award winners wanting to win a Phase II award
- Applicants for Phase I awards who have not yet won an award

**Insyte Consulting is the NYSTAR-designated SBIR/STTR Specialist for Western New York and the Finger Lakes Regions.**

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**TO REGISTER:** <http://insyte-sbirworkshop.eventbrite.com>

## SBIR/STTR Awards FY 2010 - Buffalo/WNY

Company	Topic	Agency
Calspan Corporation	Unmanned Operation of Fly-by-Wire Testbed Aircraft	DOD, Navy
	Technology for Dynamic Characterization of Micro-scale Aerial Vehicles	DOD, AF
Esensors, Inc.	High Resolution Tunable Receiver for Remote THz Sensing	NSF
	Adaptive Quantum-Dot Photodetectors with Bias-Tunable Barriers - Phase I & 2	DOD, AF
Excelerant Ceramics LLC	Novel Microstrain Enhanced Catalyst Supports for Hydrogen Production	NSF
The Electrosynthesis Company	Novel Apparatus for Producing High-Purity Lithium Metal	NSF
Graphene Devices Ltd.	Highly Conductive and Transparent Graphene Filled Acrylic	DOD, Navy
Helios-NRG, LLC	Integrated Algal Platform for Bio-Diesel and Hydrogen	NSF
	Advanced Membrane Technology for Helium Recovery	DOE
Imagination Software Corporation	Generation of 3D Root Canals from Two or More Oral Radiographs	NIH
Integument Technologies, Inc.	Visual Signature Reduction Technology	DOD, Navy
	Pressure Sensitive Adhesive (PSA) Development	DOD, Navy
Janya Inc.	Approaches and Techniques for Specialized Character Recognition	DOD, Army
	Exploiting Essential Elements of Information from Significant Activity Reports (SIGACTS) for Forensic Analysis	DOD, AF
Kinex Pharmaceuticals, LLC	Commercial Development of SRC Kinase Inhibitors for Oncology	NIH
Medical Conservation Devices, LLC	Pandemic or Mass Casualty Aseptic Shared Ventilation	NIH
Tactus Technologies, Inc.	The Virtual Cadaver Lab: An Innovative Platform to Supplement Medical Education	NIH
TAM Ceramics LLC	Nano Processing of High Temperature Ceramic Oxide Thermoelectric Materials for Enhanced Performance	NSF
	High Temperature Integrated Thermoelectric System and Materials	DOE
Tartis, Inc.	New Type of Androgen Receptor Inhibitors for Prostate Cancer Treatment	NIH
	Novel Hematopoietic Conditioning Agents for Treatment of Hematological Diseases	NIH
TPF Enterprises LLC	Lead-free Solder Alternative Interconnect Material	DOD, AF
Ultra-Scan Corporation	Applying Advances in Biometric Fusion to Contextual Data Fields	DOD, Army
United Environment & Energy, LLC	Continuous Flow Fixed-bed Biodiesel Production from Algae Oil	NSF
	High Value Renewable Chemical Production from CO <sub>2</sub> and Biodiesel Plant Byproduct	DOE
	One-step Biodiesel Production from Yellow Grease	USDA
	A Novel Catalytic Reactor for Biodiesel Production	USDA

DOD = Department of Defense, NIH = National Institutes of Health, NSF = National Science Foundation, DOE = Department of Energy, AF = Air Force, USDA = United States Department of Agriculture



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# Affiliates News

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 recommendations expressed in this publication  
 are those of the author(s) and do not necessari-  
 ly reflect the views of NYSTAR.

## Upcoming 2011 Events

June 16 SBIR Overview Workshop  
 Larkin at Exchange Building, Buffalo, NY

October 5 Principles of Lean Manufacturing Workshop  
 Larkin at Exchange Building, Buffalo, NY

For more information visit our website



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