



Powering Our Future

Catalyst Connection Annual Report 2011



CATALYST CONNECTION™

Your Strategic Partner
for Manufacturing Growth



LEFT TO RIGHT: Petra Mitchell—President and CEO
Dennis Meteny—Chairperson of the Board 2011

Manufacturing is a source of innovation for new products and services that is leading an economic rebound and providing jobs for our community. Pennsylvania's unemployment rate fell to 7.9 percent and overall manufacturing jobs in Pennsylvania rose by 2 percent in 2011. Pittsburgh saw a 1.71 percent increase in the number of manufacturing jobs in 2011, according to an On Numbers analysis. That means 1,500 more jobs were created in the industry than there were in 2010. **We also know that for every two people hired in manufacturing, enough cash flow and demand for services is generated in the community to result in employment of one non-manufacturing position.**

Since 2001, the gross regional product of manufacturing has increased by 18.4 percent in the Pittsburgh area, compared to a 17.9 percent growth rate nationally and a 1.1 percent drop in Pennsylvania. **These positive macro-economic trends are occurring because southwestern Pennsylvania manufacturers are developing and commercializing innovative new products that compete in a global economy, continually improving their processes, and investing in their workforce.** Catalyst Connection is proud to be supporting their efforts and leading to business growth and job creation.

In 2011, Catalyst Connection looked at new ways to support manufacturers in their efforts to incorporate product innovation in their business models. We created partnerships with leading universities and national laboratories that are developing these technologies. We also included other economic development organizations and industry coalitions who can foster the process of connecting the product ideas with a manufacturing company and building a successful commercialization plan. Catalyst Connection held the first annual Energy & Innovation Conference in September to bring all of these layers and resources together for the first time with local manufacturers as the engine to drive these initiatives.

This year also launched the state's Partnerships for Regional Economic Performance (PREP) to encourage regional coordination in economic development efforts. Catalyst Connection has taken



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a leadership role in coordinating activities with partners in our Southwest PREP, that encompasses most of our twelve county region, and is an active supporter in the Southern Allegheny PREP and Northwest PREP, where we share the regions with other Industrial Resource Centers. Each of these new PREP alliances have allowed the partners to share best practices and expand offerings to Pennsylvania businesses who can receive a more comprehensive solution to their needs.

As we move into 2012, Catalyst Connection has established a three-year plan of our strategic priorities that focus on the manufacturing trends and needs of our clients. This includes new services as well as new ways to reach out to companies that can benefit from them. We are excited to launch our new *My Manufacturing Connection* collaboration site which brings the interactivity of social media and virtual collaborations to allow business leaders to access valuable information and connect with peers and experts on manufacturing topics at any time right from their computers.

Other highlights of our plans for 2012 include:

- Innovation management systems and developing cultures of innovation
- Lean Manufacturing transformation plans
- Cultural assessments—why can't companies find the right people
- Workforce pipeline—supporting career and technical schools reform, placing young interns
- Identifying new business opportunities in energy markets such as Marcellus-Shale and Westinghouse nuclear

We anticipate 2012 will bring more changes and opportunities. We want to be your strategic partner to address these challenges: use our collaboration site (www.mymanufacturingconnection.org), visit our web site (www.catalystconnection.org), come to an event, or call us directly (412.918.4300). We have a wealth of knowledge and resources to make this year, your best one yet.

Our best wishes to you for a prosperous year,

DENNIS METENY — 2011 CHAIRPERSON, CATALYST CONNECTION

PETRA MITCHELL — PRESIDENT AND CHIEF EXECUTIVE OFFICER, CATALYST CONNECTION



Impact Results

Sales Increased	32,157,179.
Sales Retained	102,583,383.
Cost Savings	11,277,742.
Investment Made	
Plant and Equipment	22,240,743.
Information Systems	1,265,863.
Workforce Practices	1,517,537.
Other	926,264.
Savings on Investments/ Investments Avoided	9,707,401.
Jobs Created	277
Jobs Retained	898
Total Jobs	1,175



Each year, the U.S. Department of Commerce’s National Institute of Standards and Technology (NIST) evaluates the impact that Manufacturing Extension Partnership (MEP) centers have on the clients they serve. Evaluations conducted by Turner Marketing, an independent third party, documented the above results of client surveys conducted in 2011.

“It is really all about the Return on Investment. We help to identify and ensure, as much as possible, our client’s ROI.”

Jim Marsilio, Catalyst Connection Director, Business Development



Companies Served by Industry in 2011

INDUSTRY CLASSIFICATION	UNIQUE ACCOUNTS	PERCENTAGE %
Fabricated Metal Products	47	26
Machinery	26	15
Computer and Electronic	22	12
Plastic and Rubber Products	13	7
Miscellaneous Manufacturing	12	7
Electrical Equipment	12	7
Chemical	10	6
Transportation Equipment	8	5
Nonmetallic Mineral Product	7	4
Primary Metal Industries	6	3
Printing and Publishing	5	3
Animal Food	3	2
Construction Building	2	1
Wood Products	2	1
Furniture and Related Products	1	1
Total	176	100

Companies Served by County in 2011

COUNTY	UNIQUE ACCOUNTS	PERCENTAGE %
Allegheny	76	43
Westmoreland	26	14
Washington	19	11
Butler	17	10
Beaver	9	5
Lawrence	7	4
Cambria	7	4
Indiana	7	4
Somerset	5	3
Fayette	3	2
Total	176	100

Companies Served by Size in 2011

EMPLOYEE SIZE	UNIQUE ACCOUNTS	PERCENTAGE %
1-9	15	9
10-19	20	11
20-49	42	24
50-99	32	18
100-249	43	24
250-500	15	9
>500	9	5
Total	176	100

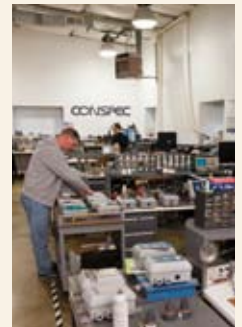
Stats 5

Revenue

FUNDING SOURCES IN 2011	DOLLAR AMOUNT	PERCENTAGE %
PA Department of Community and Economic Development	1.3M	28
U.S. Department of Commerce, National Institute of Standards and Technology, Manufacturing Extension Partnership	1.1M	24
Fees	1.7M	37
Private Grants and Other Government Funding	508,000	11

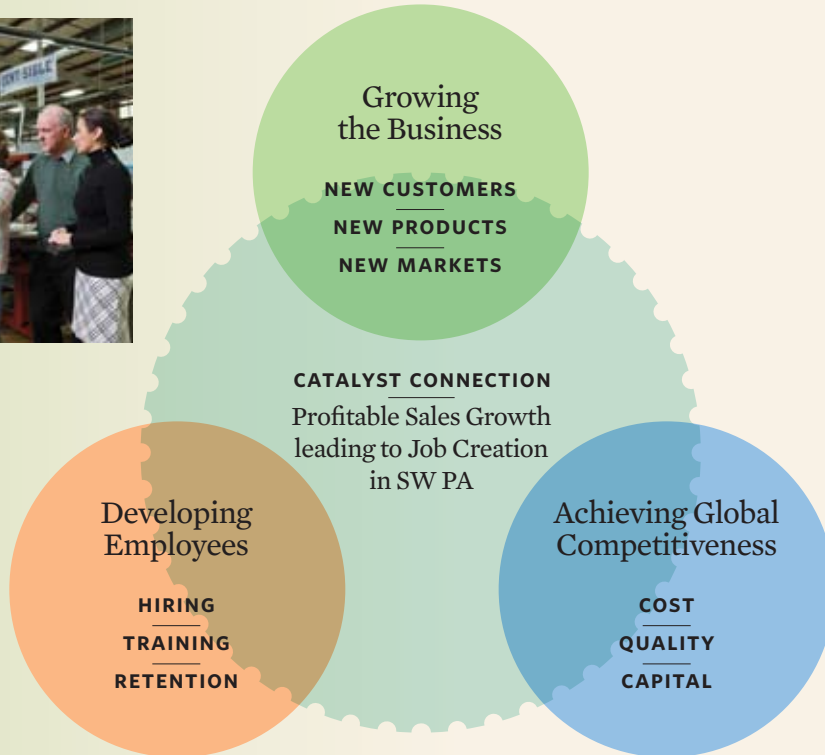
Expenditures

USE OF FUNDS IN 2011	PERCENTAGE %
Manufacturing Consulting Services and Programs	86
Other Contracts	5
Workforce Education	3
Administration and Other	6



Strategic Services

Catalyst Connection’s strategic services assist local manufacturers and deepen the results. We forge partnerships to bring new resources to our clients. We continually adjust to meet our clients’ needs and expand business opportunities.



HIRING: Tailor unique testing and training solutions designed to hire employees with today’s manufacturing skills.

TRAINING: Improve fundamental skills among employees including: reading, math, teamwork, observation, and applied technological reasoning.

RETENTION: Employ HR strategies to strengthen company culture, reduce turnover and plan for future staffing needs.



NEW CUSTOMERS: Identify and quantify customers and reach them through affordable direct marketing, corporate video and social networking tools.

NEW PRODUCTS: Develop and launch innovative products not easily copied or outsourced to low cost countries. Provide access to the region’s leading university and national laboratory based experts to fill technology gaps with new products or processes.

NEW MARKETS: Enter new supply chains, including the Marcellus Shale industry and the Dept. of Defense. Identify opportunities and serve as a resource for buyers and sellers.

COST: Customize productivity programs including Lean Manufacturing and Six Sigma to become globally competitive.

QUALITY: Reach new customers by gaining ISO and other key process and quality certifications.

CAPITAL: Access low interest loans and consultation to ensure that manufacturers have the funding they need.



Growing the Business 7

Making a great product in an efficient process is an important part of any successful manufacturing business but the true measure of success is measured by whether customers are buying a product at a good price. Catalyst Connection offers a variety of strategic and tactical services that help companies looking to find new customers, enter new markets, or launch new products.

Our consultants can help companies identify and quantify targets and make plans for reaching them regularly and consistently. We also conduct market research and analysis that lay the foundation for critical decisions about new markets and new products. Catalyst Connection can then generate winning ideas, and stage a successful launch, with the help of our reliable, proven systems.

When it comes to increasing sales in southwestern Pennsylvania or anywhere in the world, our clients can attract new customers by adopting disciplined processes for identifying prospects, crafting customized messages, and transmitting those messages effectively.

We can show companies of any size how to use low-cost online technology to streamline communications, drive targeted traffic to a web site, and stimulate inquiries and sales leads.

Strategic Marketing

Mecco Marking and Traceability

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Mecco Marking and Traceability, (MECCO) located in Cranberry Township, PA, is a leader in direct part marking, offering laser marking and dotpeen engraving machines for traceability and part verification. MECCO was looking for a cost-effective way to increase sales and reach new customers. Catalyst Connection's Market Development Consultant, Tom Meshanko, helped MECCO to develop and execute a strategic marketing campaign which included new social media channels and targeted monthly email communications to MECCO customers and prospects. Each month, personalized emails were sent to hundreds of decision makers at targeted prospect companies in various industry segments.

The email messages introduced the recipient to MECCO, the company, and their products. Emails would often include links to product videos and invitations for upcoming trade shows. The emails yielded real results including web site leads, trade show visitors and seminar participants—which ultimately lead to increased product sales. Dave Sweet, President of Mecco Marking and Traceability, remembers the early discussions of the project, **“I was concerned that the emails would not be read and there would be little benefit but I trusted Tom’s suggestions and new leads started coming in to our web site and sales increased as a direct result of this campaign.”**



STRATEGIC MARKETING

Communicating regularly with prospective clients is a key to turning them into regular customers. With Catalyst's strategic email marketing program, every message of value will reach the right person consistently, generating interest, sales leads, and — ultimately — new customers. Our program enables manufacturers to harness email's greatest strength: personalization. Instead of sending the same boilerplate message to every prospect, personalized messages can be sent to fit the recipient's role in the buying decision process.

We start by helping to define the markets a client wants to reach. Then we assess the strengths and competitive advantages from the customer's perspective. We also document the key features and benefits of products and services. Once we have profiled the most promising prospects, we use advanced software and outreach methods to build a database that includes current information on the specific individuals who specify and purchase these products.

Working with the company's own team, we create personalized messages, each tailored for a contact type: top executives, for example, or engineering managers, or quality personnel. Direct emails are sent to an individual with personalized content based on parameters. Embedded links will guide prospects to specific points on web page. In a typical e-marketing project, we create a one-year campaign with a portfolio of 12 monthly messages. Messages can be added or adjusted at any time.

Our unique on-line marketing tools include a password-protected site that tracks the exact message that motivates each prospect to click through to the company site. This puts a constant stream of leads, with complete, up-to-date information, at the fingertips of the sales staff.

Web and Video Marketing

Industrial Pump & Motor Repair



From their facility in Pittsburgh, PA, Industrial Pump and Motor Repair, Inc. (IPMR) services and distributes various types of pumps in industrial and commercial markets. Neal Rabogliatti, Catalyst Connection's e-Strategy Consultant, helped IPMR to develop a new web site several years ago, now he works with IPMR management to continuously add additional information to enhance the web site's value to both customers and prospects. The latest project entailed developing two YouTube videos on company capabilities and specialty equipment.

Neal used search engine optimization techniques to have the videos and the web site appear on page one for Google results under key word searches. "Neal put together two professional videos that really show off our capabilities," remarked Keith Gizzi, IPMR Marketing Director. "The video for our flame spray welding displays our capability to customers in a more effective way." The videos act as additional tools to inform customers and drive traffic to the web site that generates leads for new sales and requests for quotes for new work.



WEB AND VIDEO MARKETING

A web site is a company's face to the world. It is likely this is the first place that a new customer will learn about the products and services for sale and a good web site can become a manufacturer's best sales person. The Catalyst Connection team can build the entire web site, from design to launch, working to gather the facts, photographs, specifications, and other information that will make up the site content. We can also work with existing staff or contract developers to provide the project management, planning, and direction they need to produce a professional site that generates results.

With manufacturing backgrounds and understanding of southwestern Pennsylvania industry practices, Catalyst's e-strategy experts understand the differences between a business-to-business site and a garden-variety consumer site. Our consultants monitor the top web and search-engine marketing firms and major search engines to ensure that our web development and consulting skills keep pace with current best practices. Our assessment team will dig deep into the site, identifying opportunities for improvement and suggesting action items. Their findings will go into an easy-to-understand, plain-English report that shows a site's rankings, explains the reasons why, and maps out directions for improvement. We offer advanced ".net" development and additional platform development. We can also build shopping carts and configurators that most off the shelf packages or web firms don't offer.

Catalyst goes beyond simple web design and advanced SEO and now offers internet and corporate video production for multiplatform media marketing. We not only produce industry standard video presentations but also have the ability to make them stand out on Google and YouTube. Additionally the videos can easily be adapted to tradeshow and internal presentations. Our Internet Video Marketing offers the quality of commercial video production with the effectiveness of search engine optimization and portability.

Product Development

IngMar Medical

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IngMar Medical, Ltd. (IngMar) is the world leader in breathing simulation devices—a distinction built on a solid history of superior product performance, innovation and customer service. In 2010, IngMar wanted to revolutionize the way mechanical ventilation was taught. IngMar envisioned a system that would provide the therapist with immersive feedback, a system that would simulate the interactions between a patient and a ventilator just as they occur in reality. They asked Catalyst Connection to assist in the development and execution of a product development roadmap.

Catalyst Connection’s Connie Palucka created a two-phase project for IngMar to help them develop this new product 1) Design and develop the new product and 2) Develop a product launch strategy and action plan. Out of this effort came the RespiSim PVI. When used with a breathing simulator such as IngMar’s ASL 5000, the RespiSim PVI provides a fully interactive environment for teaching mechanical ventilation. Stefan Frembgen, President of IngMar Medical, comments on the project, “We believe that this project is critically important for bringing high-fidelity simulation training to the respiratory care community. It is a cornerstone for further solutions built around it with hardware and software. We foresee a host of training modules being developed, from teaching about concepts to full immersion into high-risk/low-incidence scenarios.”



PRODUCT DEVELOPMENT

Many companies have achieved significant reductions in time-to-market and product costs by implementing a new product development process that is comprehensive and focuses attention on the entire process, from idea generation to launch.

Catalyst Connection works with clients to implement a systematic, four-step product development process based on Dr. Robert Cooper’s renowned Stage-Gate® methodology. Stage-Gate® was originally developed based on the research and analysis of 500 companies and 2,000 new product projects.

As with Stage-Gate, Catalyst’s success rate of new products can increase by 10 - 30%, and time-to-market is often reduced by 30% or more. In addition, companies experience fewer new product failures; improved focus and allocation of resources; a faster development process and more successful new products.

Product Development Initiatives

T-RIC and M-RIC



Catalyst Connection has formed two new initiatives to grow innovation and product development for the manufacturing industry. Under the structure of regional innovation consortiums, we are bringing in the leading innovators, industrial leaders and government laboratories to foster development and commercialization of new product innovations.

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Technology Acceleration Regional Innovation Consortium (T-RIC)

The T-RIC Consortium brings together the region's premier technology and innovation institutions to support product development and commercialization. The Consortium includes the following partners: Advanced Manufacturing Technology Ventures (AMTV), Innovation Works, National Energy Technology Lab (NETL), PA NanoMaterials Commercialization Center, and the University of Pittsburgh. As the leader of the T-RIC initiative, Catalyst Connection firmly believes that technology acceleration via T-RIC epitomizes the axiom "the whole is greater than the sum of its parts."

The T-RIC Program helps small manufacturers reduce their risk and increase the likelihood of success when commercializing new technologies and products. Manufacturers participating in T-RIC see the Program as a way to begin an innovation culture transformation within their organization. The process begins when a small manufacturer describes their idea in an "Innovation Concept Form" and submits it to the T-RIC Consortium for review. The Consortium defines additional information that should be gathered and considered before the company makes a go / no-go decision related to developing the innovation. Consortium members then assist the manufacturer in collecting information and assessing the technical viability, return on investment, and degree of risk related to the project. This information forms the foundation of the company's business case for the project. Once the company decides to move the project into development, the Consortium is available to help map the development plan, find appropriate partners, and develop and execute a launch strategy.

Marcellus Shale Regional Innovation Consortium (M-RIC)

Catalyst Connection recently launched the M-RIC Program to enhance the competitiveness of regional manufacturers in the Marcellus Shale supply chain. The primary objective of M-RIC is to identify opportunities for innovation in all supply tiers of the Marcellus Shale sector. M-RIC will then help small- and medium-sized manufacturers incorporate innovation into their products and services so that they can position themselves to take advantage of this rapidly growing sector.

There is an abundant amount of publically available information on the economic impact of the Marcellus Shale play from a variety of sources, including industry associations, governmental agencies and academia. Much of this information is redundant, self-serving, contradictory, inaccurate, industry promotion or simply not relevant to addressing the market intelligence needs of small manufacturers. It is our intent to obtain to develop true market intelligence and opportunities that provide practical benefits to small manufacturers to enhance their competitiveness in the Marcellus Shale supply chain.

Exporting

Cardinal Resources

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With offices in the South Side neighborhood of Pittsburgh, PA, Cardinal Resources, LLC, is a world class environmental services and technology firm. In 2009, they participated in the ExporTech Program which is conducted by Catalyst Connection and the U.S. Commercial Service. The objective of this program is to help manufacturers expand into global markets. ExporTech incorporated three training sessions over a three month period. Cardinal Resources learned how exports could become a major growth driver for their company. They also identified hurdles to expansion and worked with a coach from the U.S. Commercial Service to develop an international growth plan.

In 2011, the company was awarded the Export Achievement Award by Congressman Mike Doyle for the successful sales to foreign markets of their Red Bird System, a self-contained, solar-powered water purification system. Kevin Jones, Cardinal Resources President, sees the real opportunity for a small manufacturer to pursue exporting. “Over the last two years Cardinal Resources, with knowledge learned from the ExporTech Program, has successfully developed new markets or increased sales to countries such as Senegal, Ghana, India, China, Brazil, Turkey and Japan. The value of the sales exceeds more than 7 million USD with certainly more sales to follow.”



EXPORTING

Foreign markets, that until now have been difficult to penetrate, represent a huge opportunity for small and mid-size manufacturers. Catalyst Connection helps local manufacturers develop an international sales strategy that will identify your best opportunities and address your specific challenges. This includes connecting companies with critical federal and state export assistance programs. We assist manufacturers in the exporting decision process with market research and competitor analysis. We can also assist with a successful execution of the exporting strategy by identifying vital tactics and assigning responsibilities, timelines, and performance measures.

We use state-of-the-art software tools to build a prospect database in these key international markets, complete with account and contact information. Then we help manufacturers reach out to these contacts with sales representatives or channel partners and arm those reps with the information and materials they'll need to do business. Catalyst Connection team members can also develop a program to assure compliance with federal and international regulations to avoid penalties and unpleasant surprises.



Achieving Global Competitiveness

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Today's global economy allows products to be purchased and shipped within days from anywhere in the world. Businesses must be able to compete against other companies based on product quality, price and customer service from all parts of the world. Continuous Improvement tools are key to achieving the competitive edge. The first place that every manufacturer should look to improve is within. Finding ways to make operations run better, faster, and more efficiently goes straight to the bottom line. Productivity, quality, and standardization continue to be the best strategies for measurable impact.

Catalyst Connection has expertise in a full range of Global Competitiveness disciplines:

1. **Financial Capital:** Competitiveness starts with the financial resources to purchase resources. Capital is key for any manufacturer to make the improvements necessary to be competitive.
2. **Lean and Six Sigma:** Results-oriented approaches that apply throughout the operation, from customer contact to shipping, and reduce both costs and lead times. The disciplined, data-driven six sigma method for eliminating defects in manufacturing or transactional processes can generate significant cost savings.
3. **Quality and Business Systems Services:** Quality standards in products and processes reduce defects and improves customer satisfaction.
4. **Power Procurement:** Electric and gas bills are a significant cost to most manufacturing budgets. Exploring opportunities to lower these costs, can improve profitability.

Financial Capital

H&W Global Industries

From their facilities in Indiana, PA, H&W Global Industries (H&W), Inc. is a provider of metal immersion processes to manufacturers. H&W provides passivating, chemfilm and electroless nickel coating services and power coating. The demand for anodizing from customers has steadily increased over the last 5 years.

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In 2010, H&W purchased a new building and was looking to purchase anodizing process equipment to expand the capabilities and capacity of the company. Catalyst Connection's, Managing Director of Financial Services, **Art Tintori, assisted H&W president, J.P. Habets, to explore financing options to secure the needed capital. As a result, H&W received financing from three sources:** Catalyst Connection's Manufacturing Technology Loan Fund, Indiana County and the Southwestern PA Commission's ARC loan. "This purchase has reduced the need to use a third party and will facilitate growth in sales," remarked Mr. Habets.



FINANCIAL CAPITAL

The biggest hurdle, in the race for competitive performance, is often capital. At Catalyst Connection, we make it our job to gather the latest intelligence on financial resources, investor access, and loan programs that are available to the southwestern Pennsylvania manufacturing community. And we're eager to share everything we know. Our financial experts can work with you to assess your company's financial situation, develop a plan, and implement a solution aligned with your short- and long-range capital goals.

Catalyst Connection assists manufacturers to achieve funding objectives by:

- Identifying the most appropriate resources and options.
- Verifying your eligibility for funding from a variety of public and private sources.
- Customizing both public-private and commercial loan packages.
- Applying for state and federal assistance through programs operated by the Industrial Development Authority, the Pennsylvania Economic Development Finance Authority, the Small Business Administration, and Small Business First.
- Connecting with leaders in the banking, leasing, accounting, insurance, investment, legal, and real estate sectors who can provide specialized, expert counsel.
- Applying for federal, state and local assistance through programs operated by the Small Business Administration, the Pennsylvania Department of Community and Economic Development and local Economic Development Organizations.

We are also a channel for our own commercial loan programs, including:

- Manufacturing Technology Loan Fund
- Mon Valley Manufacturing Fund
- Allegheny County MaGC Capital Fund
- Allegheny County MaGC Express Fund

Lean and Lean Six Sigma

Conspec Controls



In Charleroi, PA, Conspec Controls, Inc. manufactures affordable and robust gas sensors, detectors, and systems for numerous industries in a variety of diverse applications. As the production volume for Conspec products increased, demand for the service and rebuilding of those devices also increased. With a small manufacturing staff on hand that was primarily focused on new production, it was a challenge to balance the need to rebuild products along with sustaining top line sales growth. They turned to Catalyst Connection for assistance implementing a quick, low cost solution to improve the turnaround time of rebuild units that were in excess of 50 days at the start of the project. Tom Bloom, Managing Director of Continuous Improvement Services at Catalyst Connection, assisted Conspec team with lean tools such as value stream mapping and kaizen to remove waste from the existing process and redesign the way they handled rebuilds.

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Two months after the initial event the turnaround times had been reduced to less than 10 days with the focus then shifting to sustaining those improvements. “There was a real excitement from everyone to be involved with the solution,” reported Bill Geisler, Operations Manager. “That buy in was just as important as the solution itself.”



LEAN AND LEAN SIX SIGMA

Lean Manufacturing can help a company deliver quality products on time and meet customer expectations at a competitive cost—while respecting employees, the environment, and the community.

Our consultants train operations and production teams to identify and reduce waste everywhere in an organization—from order entry, purchasing, or engineering, to the factory floor. We apply a customized approach tailored to a company’s level of competency as well as its specific constraints, including production schedules and employee needs.

We work with each manufacturer’s individualized needs and experience level. The first step is to build a firm foundation, typically by starting with 5S and standardized work. We introduce more advanced tools such as value stream mapping, kaizen, cellular manufacturing, kanban pull systems, and setup reduction.

Lean Six Sigma is a disciplined, data-driven approach for eliminating defects in manufacturing or transactional processes. It can improve performance in almost any business, whether the deliverables are products or services. Our approach introduces best practices, including statistical methods; follows a well-defined sequence of steps, and aims at financial targets such as cost reduction or increased profit. VPs, quality managers, software engineers, and many other decision-makers apply what they learn to processes that range from customer service to human resources and accounting.

This approach aims to eliminate waste quickly, reduce cost, and increase growth opportunities.

Quality Systems

Pittsburgh Plastics Manufacturing

Located in Butler, PA, Pittsburgh Plastics Manufacturing is a contract manufacturer that uses its proprietary polymers and foams to manufacture customized cushioning solutions for many markets including footwear, medical and safety. Contract manufacturing is very competitive in the polymer industry.

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Opportunities with international clients require Pittsburgh Plastics to achieve quality certifications recognized world-wide. Pittsburgh Plastics had worked with Catalyst Connection in the past when working to obtain ISO 9001:2008 Quality Management system registration. Recently, Catalyst's Quality/Process Improvement Consultant, Craig Wilson, assisted Pittsburgh Plastics in preparation for ISO 13485 Medical Device Certification. The results of the quality efforts are that Pittsburgh Plastics has achieved successful certifications in for Quality Management Systems and Medical Devices.

These certifications help Pittsburgh Plastics to secure new customers and opportunities, specifically in the medical device market. Toni Lukavich, Pittsburgh Plastics Quality Assurance Manager explained, "Craig Wilson has been a real mentor in this quality management process. His advice on how to set up our processes and documentation has allowed us to pass through the ISO quality audits with flying colors."



QUALITY SYSTEMS

Every manufacturer sees the primary value of quality; products with fewer errors allow more product to be shipped to satisfied customers, with fewer returns. Established quality standards can also help qualify a company to supply new markets and industries. The International Organization for Standardization (ISO) is the most influential body when it comes to quality certification in the world, and its guidelines are becoming universal requirements. They ensure the delivery of consistent, effective products and services to customers. Standards like ISO 9001 (quality), ISO/TS 16949 (automotive), ISO 13485 (medical devices), or AS9100 (aerospace) are proven guidelines for developing and maintaining the highest level of customer satisfaction and improvement. Increasingly, certification is a precondition for approval as a vendor or for preferred supplier status.

Our consultants assist manufacturers to develop quality manuals, procedures, and other relevant documentation, as well as train employees to meet ISO standards. We also conduct readiness reviews in preparation for registration, annual audits, or train internal auditors.

Power Procurement

TIGG Corporation



TIGG Corporation, in Oakdale, PA, fabricates steel tanks and pressure vessels, as well as treatment systems and equipment for purifying air and water in industrial and environmental markets. Their activated carbon adsorption systems are effective for removing trace contaminants from both air and water. In addition to sales of this equipment, TIGG offers rental service to customers who need the equipment for a shorter period of time. Georgiana Riley, President of TIGG Corporation, was looking for ways to keep expenses low and remain competitive. Catalyst Connection set up a meeting with Erich Landis of NorthEast Energy Advisors to review electricity and natural gas rates that TIGG was paying.

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Erich was able to provide options with an aggregate energy solution that saves TIGG approximately 18% from their previous electric rate and 31% from their previous gas rate.

“We appreciate opportunities to cut costs,” said Georgiana Riley, “especially when the process was so easy to do. NorthEast Energy Advisors and Catalyst Connection were great partners for TIGG Corporation.”



POWER PROCUREMENT

The Electricity Generation Customer Choice and Competition Act gives electric customers in Pennsylvania the ability to choose the company that generates their electricity. At the time deregulation was introduced in 1996, caps were placed on electric rates to protect consumers from rising prices.

Since that time, the wholesale cost of electricity has increased, but these electricity providers were not able to raise their rates to cover their increased costs. However, Pennsylvania rate caps have been removed and many manufacturers have seen large increases in their power rates. The good news is, Catalyst Connection and our partner, Northeast Energy Advisors, can provide companies with options about how multiple manufacturers can aggregate their electrical usage to secure better pricing. They can also use these services for natural gas rates as well. Since January 2009, Northeast Energy Advisors has conducted bulk purchases of electricity and gas for Catalyst Connection clients. 44 manufacturers have signed agreements with energy companies that NorthEast Energy Advisors was able to negotiate for them. The total projected savings from the program is over \$1,000,000, which is an average savings of 13% for each.

Northeast Energy Advisors, a local energy procurement firm, is experienced in evaluating and selecting reliable and cost-effective electricity. They will work on behalf of manufacturers to generate the lowest price from reliable power sources. Once the cost is finalized, a contract will be signed directly with the new electricity or natural gas source.

Connectivity

My Manufacturing Connection

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Catalyst Connection is always looking for ways for the southwestern Pennsylvania manufacturing community to have all of the tools they need to be at peak performance. Arguably the most powerful tool is knowledge. Access to information and the ability to use that information for decision-making can be the crucial difference between success and failure.

With this in mind, Catalyst Connection created *My Manufacturing Connection* that enables manufacturing leaders to interact with each other, the Catalyst Connection staff, and other key service providers and subject matter experts in the community. The key feature of the site is the public and private collaboration groups where project teams and special interest groups can house key documents, pose questions, share information and hold discussions on important industry best practices. The site is also filled with news, blogs and discussions from the community. Members of *My Manufacturing Connection*, called “colleagues,” can now interact with their peers on a specific topic or question they have right from their computer. Online groups are formed into collaborations among colleagues. Catalyst Connection staff share their knowledge and advise in the Manufacturer’s Toolbox, which a collection of key business topics that are fundamental to the growth of all manufacturing businesses.

The services and tools of *My Manufacturing Connection* are available to all members of the manufacturing community at no cost.

To see the value that this site can provide to you, visit www.MyManufacturingConnection.org.

My Manufacturing Connection
empowered by  CATALYST CONNECTION





Developing Employees 19

A high-performance workforce doesn't just happen. According to an Industry Week study, the world's most successful manufacturers get superior business results by doing two simple things exceptionally well:

ONE: They build effective programs to select, develop, and retain talent.

TWO: They engage, and invest in, all employees — from the executive suite to the shop floor — by giving them tools for solving problems and leveraging opportunities.

Employees are the heart and soul of any company. Hiring and keeping a good workforce may seem impossible but Catalyst Connection offers a comprehensive approach to developing employees. This process includes helping manufacturers to identify critical job skills, find the right talent for each position, build every worker's abilities, and retain the best talent year after year.

Catalyst Connection incorporates the world leading companies and most successful tools in employee development into our consulting and training to offer a comprehensive workforce development program tailored to the needs of each manufacturer.

Employee Selection

Operating Engineers

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The Western Pennsylvania Operating Engineers Joint Apprenticeship and Training Program is an educational training program organized for the purpose of providing qualified Heavy Equipment Operators and Mechanic Technicians to employers in industry by utilizing two related but separate apprenticeship courses: a Heavy Equipment Operator course and a Heavy Equipment Mechanic Technician course. Catalyst Connection has been providing training selection services for the WPOE-JATP for several years to help determine which candidates have the greatest possibility of success in the apprentice program that takes place at the New Alexandria training facility.

Catalyst Connection's Organizational Development Consultant, David Rea, assists with tasks including job-related assessments, test scoring and data analysis for the apprentice candidates. This assessment process has been conducted from 2008 to 2011 and the results show that individuals who successfully passed the assessments were likely to successfully complete the Operating Engineers' apprentice program. **Steve Columbus, WPOE-JATP Administrative Manager, credits the training selection process as a key part to the success of the apprentice program.** "Our apprentice program must turn out highly capable apprentices in order to build a level of trust from the industry employers. The candidate testing efforts provide data that allows us to determine which candidates to select."



EMPLOYEE SELECTION

Catalyst staff members, specially trained in industrial and organizational psychology, conduct our employee development consulting and training programs including:

- 1. Employee Selection and Hiring:**
Manufacturers find that only 30% of new hires actually succeed at their jobs.
- 2. Employee Development and Retention:**
Daily productivity can be increased by improving leadership skills among managers, and by building fundamental skills among all workers.
- 3. Customized Assessments and Testing:**
Assessments and testing can be specifically developed to organizational or job requirements.
- 4. Leadership Training and Coaching:**
Manufacturing supervisors and managers frequently face situations and problems for which they have no experience or training. We provide enhanced leadership skills with innovative solutions designed to improve employee performance through these coaching, communication, and problem-solving courses.
- 5. Succession Planning:**
Take a proactive approach to safeguarding and continuing the knowledge held by the most successful employees for continued benefit to the company.

We will help identify an organization's long-term goals, identify employee developmental needs, and make predictions based on workforce trends.

Leadership Training

ProMinent Fluid Controls



ProMinent Fluid Controls, Inc. (PFC) provides precision equipment for water and wastewater treatment, chemical process and food and beverage processing. PFC wanted to offer their supervisors and managers with leadership skills to help them with the challenges of managing a team. Lee Kraus, Catalyst Connection’s Workforce Training Consultant, provided Frontline Leadership Training Program to seven supervisors and eight managers on-site at the PFC facility. A few months after the program was completed, the participants were asked to report on their leadership progress. All in attendance reported more than one new leadership skill that they were able to see positive results, such as listening skills and recognition of employees.

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The majority of the participants reported to have turned potential Win/Lose situations into Win/Win results. PFC Operations Manager Jim Dinardo was pleased with the results. “The Frontline Leadership program was a great way for our team to sharpen their leadership tools together.”



LEADERSHIP TRAINING

The ability to achieve an organization’s goals, whether they be focused on quality, productivity, or profitability, all rely on one common resource — good employees. Good employees rely on solid leaders to guide them. Catalyst Connection provides programs to help develop leadership skills from newly hired to experienced team members.

Our Organizational Development staff are specially trained in industrial psychology, workforce development, and continuous improvement to facilitate consulting and training programs. Catalyst Connection partners with the leading institutions of employee development, including Development Dimensions International (DDI), to bring a comprehensive selection of learning options in the areas coaching, communication, and problem-solving.

Training within Industry

Thermal Industries, Inc.

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With facilities in Pittsburgh, PA, Thermal Industries, Inc. manufactures replacement windows and patio doors. Thermal Industries has worked with Catalyst Connection for several years to help staff with customer service training and leadership, but now they were looking to develop problem solving skills for their team. Catalyst Connection's Workforce Training Consultant, Lee Kraus, provided ten supervisors and group leaders Demand Flow Technologies Job Instruction training under the Training Within Industry program. He also delivered four hours of Root Cause Analysis training for them. This helps Thermal Industries leaders to drill down to the cause of a problem and implement effective, consistent corrective actions to fix them.

Todd Rascoe, Thermal Industries Executive Vice President, reports on the progress, "Our supervisors now feel empowered and prepared to find their own solutions to problems they uncover on the shop floor. **This is an important strategic shift for the continued success of Thermal Industries.**"



TRAINING WITHIN INDUSTRY

The Training Within Industry (TWI) Program builds upon lean manufacturing principles through training standardization and employee involvement. TWI consists of standardized programs addressing the essential skills needed by supervisors, team leaders, and anyone indirectly leading others. Studies show that the effectiveness and retention of training increases significantly when the material is applied soon after instruction. TWI programs follow a proven, four-step process that is simple, straight forward, and easy to implement: Preparation, Presentation, Application, and Testing. Small class sizes keep everyone involved and maximize success. According to the TWI theory, supervisors play a major role in achieving and maintaining stability on the shop floor. Ensuring quality products, cost control, efficient production, and a safe work environment are viewed as the responsibilities of supervision.

Catalyst Connection is a certified provider of the Training Within Industry Program by the TWI Institute, the national leader in the TWI training.

TWI Training Modules:

Catalyst Connection offers two training modules from the TWI Program:

- 1. Job Instruction:**
Quickly train employees to do a job correctly, safely, and conscientiously
- 2. Job Methods:**
Improving the way jobs are done for continual improvement
- 3. Job Relations:**
A leader gets results through people

Adventures in Technology

L&S Machine



L&S Machine Company (L&S) is a precision machine shop doing business both nationally and internationally in the nuclear, naval, and energy generation markets. Scott Dietz, Manager of Workforce Initiatives at Catalyst Connection, contacted L&S President, Rob DiNardi, about taking part in the Adventures in Technology (AIT) program. With more than 10 years of success, AIT is an industry-focused business, education and community partnership designed to increase the visibility of regional career opportunities in southwestern Pennsylvania. L&S was paired with students from nearby Eastern Westmoreland Career and Technology Center. The students were charged with researching barcoding systems for use in the manufacturing facility. The company was very pleased with the end results reported by the students and felt the recommendations would be valuable to the organization and portions of them have since been implemented by the company. Rob DiNardi recalls the experience, “We were all impressed by the students and the effort that they put into this project. **It is important for those of us who work in manufacturing today, to show the next generation the value of manufacturing as a career path.**”

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BUILDING TOMORROW'S WORKFORCE

Building awareness of employment opportunities in manufacturing is a Catalyst Connection priority. We operate programs that connect employers with future employees at both the high school and college level. Other programs focus on providing students with the training, the education, and the decision-making information they need to succeed in manufacturing and technology careers of all kinds.

Adventures in Technology—This program brings together the brightest minds of tomorrow's workforce with southwestern Pennsylvania companies to engage in hands-on improvement projects. This provides a fulfilling learning experience to the high school and technical students and the company also receives value from the program. Businesses in the manufacturing, information technology, biotechnology, and other technology industries have participated in the Adventures in Technology program. Since the program began back in 2002, more than 2,000 students from 60 high schools and technical schools worked in teams supervised by mentors at more than 60 companies. As the students are immersed into the issues of the business world, they learn that southwestern Pennsylvania offers attractive career opportunities after they graduate.

Internships— Catalyst Connection offers an internship program to college students as part of a partnership with Innovation Works. We assist manufacturing companies by providing up to half of the salary cost to qualified summer interns to supplement existing workforce and build a pipeline of talent to fulfill future hiring needs.

These programs serve to get the next generation of the manufacturing workforce excited about the careers in southwestern Pennsylvania. The long term impact on the quantity and quality on the future of manufacturing is the practical benefit of these programs. The excitement and energy by both students and participating companies is the immediate reward to every Catalyst Connection employee who makes it all possible.



“Over the years, CMC has benefited in many ways from the expertise provided by Catalyst Connection. The services they provide make a real impact on this region’s manufacturing companies.”

Dennis Meteny, Catalyst Connection Chairperson and Cygnus Manufacturing Company President and CEO

Board of Directors

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EXECUTIVE COMMITTEE

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KFMR

PHOTOGRAPH

FRONT ROW: LEFT TO RIGHT —

Peter Ferraro (TREASURER) —KFMR; Georgiana Riley—TIGG Corporation; Robert Visalli—Kerotest Manufacturing Corp.; Mark Ulishney—Case Sabatini; Richard Rosey—Axion Power International, Inc.; Eric Kulikowski—Philips Home Health-care Solutions; Georgia Berner—Berner International Corp.

BACK ROW: LEFT TO RIGHT —

Bradley Franc—Houston Harbaugh; James Anderson (VICE CHAIRPERSON) —The Techs; Jerry Hudson, Jr.—Concurrent Technologies Corporation; Patrick Gerity, Ph.D.—Westmoreland County Community College; Dennis Meteny (CHAIRPERSON) —CMC-Cygnus Manufacturing Company; Robert Oltmanns—OPR Group, LLC; Christina Gabriel, Sc.D.—University Energy Partnership; Gerald Holder, Ph.D.—University of Pittsburgh; Trevor Dunthorne—All-Clad Metalcrafters, LLC; Raymond Yeager—Ductmate Industries, Inc.; Ian Sadler—MCC International, Inc.

MISSING FROM PHOTO —

Charles Blocksidge, Ph.D.—Community College of Allegheny County; Richard Brean—United Steel Workers of America; Craig Heryford (SECRETARY) —Buchanan Ingersoll & Rooney PC; Daniel Krinock—Pace Industries-Airo Division; Donald Mateer III—Specialty Tires of America, Inc.; Jeffrey Owoc—Bayer HealthCare LLC; Dewitt Peart—Allegheny Conference on Community Development and Affiliates; Dominique Schinabeck—Acutronic USA Inc.; John Skiavo—Economic Growth Connection of Westmoreland

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Catalyst Connection Staff 2011

PHOTO: LEFT TO RIGHT — Thomas Bloom, Art Tintori, Anna Mancuso, Lee Kraus, Jeanne Straw, Timothy Clark, Cindy Connelly, Eric Piotrowski, Edward Wagner, Mara Connelly, Petra Mitchell (PRESIDENT), Allison Haag, Pauline Yankes, James Marsilio, Thomas Reed, Debbie Wright, Jeffrey Lammert, Allison Marsiglio, David Rea, Neal Rabogliatti, Thomas Meshanko, Scott Dietz; *MISSING*—Connie Palucka, Craig Wilson.



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 Velocity Equipment Solutions, LLC
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 West Point Products
 Wojanis Supply Co., Inc.
 Wolfe Industrial Service
 Zoresco Equipment Company

Client List

Catalyst Connection has served more than 1,400 small- and medium-sized southwestern Pennsylvania-based manufacturing companies.



“Our employees have a rich variety of experiences that help clients learn best practices, avoid costly mistakes, and respond to global challenges.”

Jeanne Straw, Catalyst Connection Vice President of Administration



Catalyst Connection is a private not-for-profit organization headquartered in Pittsburgh, Pennsylvania. We provide consulting and training services to small-to-mid-size manufacturers in southwestern Pennsylvania, accelerating revenue growth and improved productivity. Through active collaboration with our clients and the manufacturing community at large, we contribute to the growth, vibrancy, and ongoing robustness of manufacturing in our region.

Many of Catalyst Connection's projects are financed [in part] by a grant from the Commonwealth of Pennsylvania, Department of Community and Economic Development, and a cooperative agreement with the National Institute of Standards and Technology's Hollings Manufacturing Extension Partnership.



For more information about PA manufacturing visit www.pamade.org

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