




Manufacturing Scorecard: 2012




2011 Gross Regional Product

 <p>3rd</p>	<p>...largest and second fastest growing industry in Pittsburgh MSA in terms of gross regional product (\$12.6B). Between 2010 and 2011, manufacturing gross regional product saw an increase of...</p>	 <p>10.3%</p>
 <p>\$141,365</p>	<p>...gross regional product per manufacturing employee. This outperforms Pennsylvania and the US. Since 2010, gross regional product per manufacturing employee has increased by...</p>	 <p>8.5%</p>

2011 Economic Impact

 <p>293,911</p>	<p>...jobs are supported directly and indirectly by manufacturing in the region. The amount of business taxes, in billions, attributable to manufacturing industry...</p>	 <p>\$1.9</p>
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2012 Employment

 <p>96,052</p>	<p>...manufacturing employees. This accounts for over 8.1% of the total workforce. Data for 2012 indicates an increase in manufacturing employment by...</p>	 <p>0.5%</p>
 <p>17.4%</p>	<p>...of manufacturing employment is in Fabricated Metals. In addition, Primary Metals employment is...</p>	<p>4X the national average</p>

2012 Establishments

 <p>2,909</p>	<p>...manufacturing establishments. Among all metropolitan areas, the region ranks...</p>	 <p>19th</p>
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2012 Wages

 <p>\$57,194</p>	<p>...average annual wage for manufacturing employees. This is 17.4% higher than the average job in the Pittsburgh metropolitan area. In 2012, the annual wage for a manufacturing employee increased by...</p>	 <p>1.6%</p>
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2012 Exports

 <p>\$14.1</p>	<p>...billion in exports. Among all metropolitan areas, primary metal exports rank...</p>	 <p>5th</p>
 <p>30.7%</p>	<p>...of all Pennsylvania exports even though Pittsburgh MSA only has 19% of the state's population.</p>	 <p>19%</p>

2012 Expansions

 <p>53</p>	<p>...announced manufacturing expansions. The highest recorded since 2008. These expansions are expected to generate...</p>	 <p>2,832 jobs</p>
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CATALYST CONNECTION™
Your Strategic Partner for Manufacturing Growth

Overview of Manufacturing and the PA Industrial Center (IRC) in Southwestern Pennsylvania

September 12, 2013

Raymond Yeager
President and CEO, DMI Companies
Chairman of the Board

Petra Mitchell
President and CEO

a NIST | Network
MEP | Affiliate

Southwestern Pennsylvania Manufacturing Scorecard, 2012 - *Highlights*

Prepared by:



Pittsburgh Regional Alliance

An Affiliate of the Allegheny Conference on Community Development

Summary: Updates from 2011 to 2012

- Manufacturing is still the 3rd largest industry but its year to year growth decreased slightly
- Productivity is still better than the benchmark of 2010 but slightly less than in 2011
- Slight increase in employment
- Fabricated Metals still our largest sector
- We lost 30 establishments
- Wages went up (this is probably the best news!)
- Exports went up
- We had more announced expansions in 2012 than in 2011



Gross Regional Product

Gross Regional Product in the Pittsburgh MSA			
	2010	2011	2010 to 2011
Financial Activities	\$23,172	\$23,496	1.4%
Professional and Business Services	\$17,926	\$18,800	4.9%
Manufacturing	\$11,402	\$12,579	10.3%
Health Care and Social Assistance	\$11,393	\$11,838	3.9%
Government	\$9,714	\$9,813	1.0%
Wholesale Trade	\$6,850	\$7,359	7.4%
Retail Trade	\$6,639	\$6,855	3.3%
Leisure and Hospitality	\$4,083	\$4,440	8.7%
Construction	\$4,071	\$4,295	5.5%
Information	\$3,287	\$3,431	4.4%
Natural Resources and Mining	\$2,585	\$3,324	28.6%
Transportation and Warehousing	\$3,034	\$3,162	4.2%
Other Services	\$2,832	\$2,917	3.0%
Educational Services	\$2,795	\$2,840	1.6%

Source: Bureau of Economic Analysis, July 2013
 Note: Yellow boxes indicate data was estimated due to BEA reporting restrictions.

The Pittsburgh MSA experienced a 10.3% increase in its Manufacturing GDP from 2010-2011, significantly higher than in Pennsylvania (2.3%) and the U.S. (6.2%).

Manufacturing is the third largest industry at \$12.6 B and the 2nd fastest growing industry in our region, after Mining and Natural resources.

Productivity (GDP / Employee)

Gross Domestic Product - Nation, Pennsylvania, and Pittsburgh								
Manufacturing		2002	2007	2010	2011	2002 to 2011	2007 to 2011	2010 to 2011
GDP (\$mil)	Pittsburgh MSA	\$11,550	\$13,496	\$11,402	\$12,579	8.9%	-6.8%	10.3%
	Pennsylvania	\$69,329	\$70,917	\$6,4752	\$66,228	-4.5%	-6.6%	2.3%
	US	\$1,355,537	\$1,698,022	\$1,630,522	\$1,731,466	27.7%	2.0%	6.2%
GDP/Employee	Pittsburgh MSA	\$100,712	\$134,148	\$130,339	\$141,365	40.4%	5.4%	8.5%
	Pennsylvania	\$91,063	\$107,644	\$115,534	\$117,272	28.8%	8.9%	1.5%
	US	\$89,126	\$122,751	\$141,938	\$147,969	66.0%	20.5%	4.2%

Source: Bureau of Economic Analysis, July 2013

Gross regional product per employee is one measure of productivity and here is where we see the really good news about manufacturing. In the last year, our region experienced an 8.5% increase, outpacing Pennsylvania which was at 1.5% and the US at 4.2%.



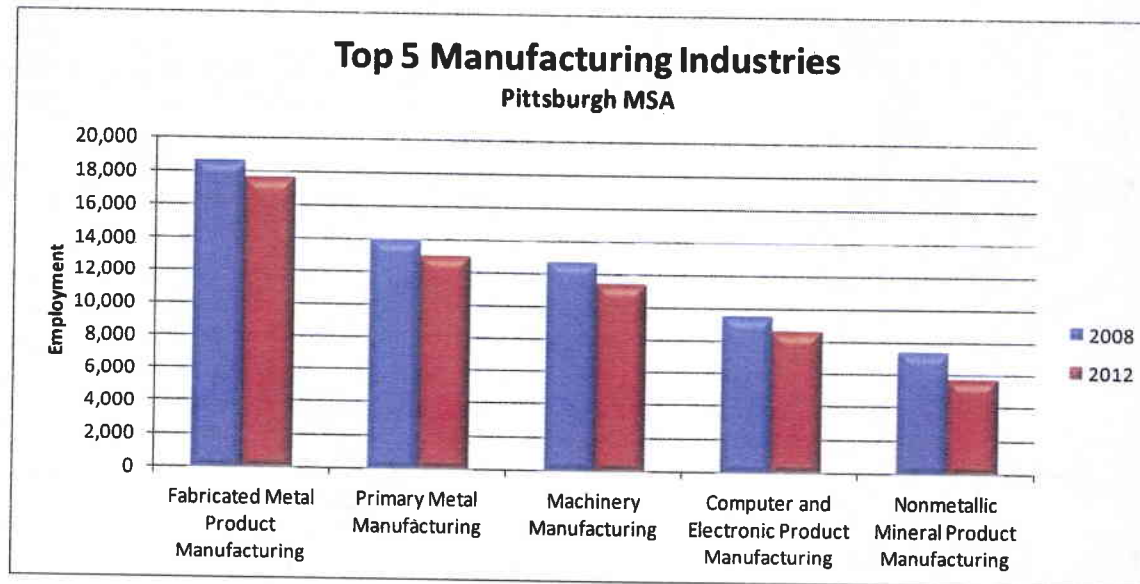
Employment

Southwestern Pennsylvania - Top Industries by Employment - 2008 to 2012							
	2008	2009	2010	2011	2012	2008 to 2012	2011 to 2012
Education and Health Services	227,852	230,169	232,928	236,485	238,401	4.6%	0.8%
Trade, Transportation, and Utilities	228,671	221,007	220,503	223,454	223,870	-2.1%	0.2%
Professional and Business Services	158,558	151,133	154,101	160,346	165,760	4.5%	3.4%
Leisure and Hospitality	113,685	112,120	113,144	115,741	117,426	3.3%	1.5%
Manufacturing	105,942	95,410	94,016	95,567	96,052	-9.3%	0.5%
Financial Activities	69,403	68,996	69,583	70,042	72,035	3.8%	2.8%
Construction	58,378	54,282	50,542	52,473	54,344	-6.9%	3.6%
Other Services	43,431	42,174	41,556	41,430	41,996	-3.3%	1.4%
Information	21,351	19,987	18,534	18,444	18,402	-13.8%	-0.2%
Natural Resources and Mining	12,146	12,568	13,087	15,505	17,636	45.2%	13.7%

Source: BLS Quarterly Census of Employment and Wages, July 2013

Manufacturing employment increased by 0.5% from 2011. This is the 2nd year in a row for an increase in employment. Since 2008, manufacturing employment is still down by 9.3%, with the low point being in 2010.

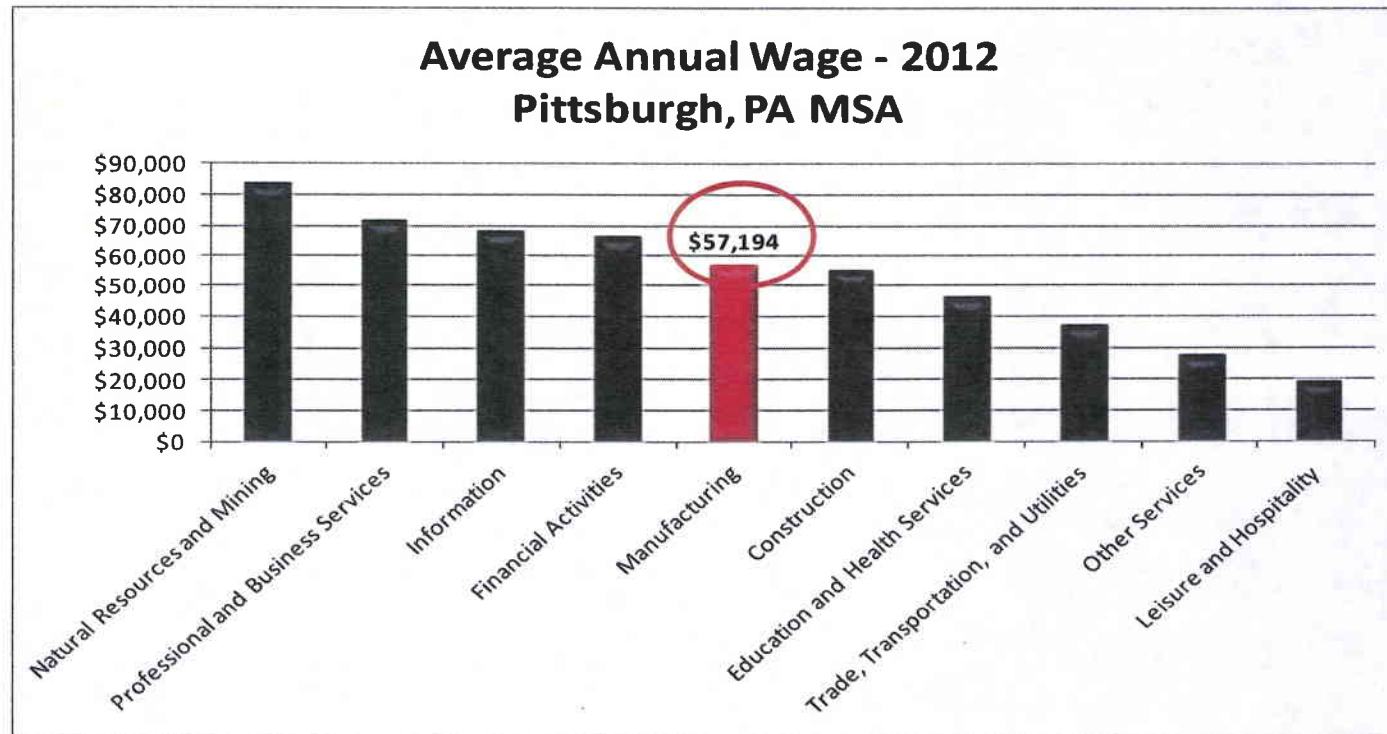
Top 5 Industries by Employment



Source: BLS Quarterly Census of Employment and Wages, July 2013

Even with some slight decreases in employment, overall our top 3 industries remain at the forefront of our manufacturing economy and are rooted in our strong history of steel and materials manufacturing. They are fabricated metal products, primary metal manufacturing and machinery manufacturing.

Wages



Source: BLS Quarterly Census of Employment and Wages, July 2013

The bottom line is that wages went up....again. The average wage in manufacturing represents steady annual growth, with a total of a 7.3% increase in the last 5 years. Manufacturing wages are still 17.4% higher than the overall average wage.

Electro-Mechanical Industry Cluster Initiative

Agile Innovation in Manufacturing (AIM)

In Partnership With:

Innovation Works

National Center for Defense Machining and Manufacturing

Westmoreland-Fayette Workforce Investment Board



Industry Cluster Analysis – “Electro-Mechanical”

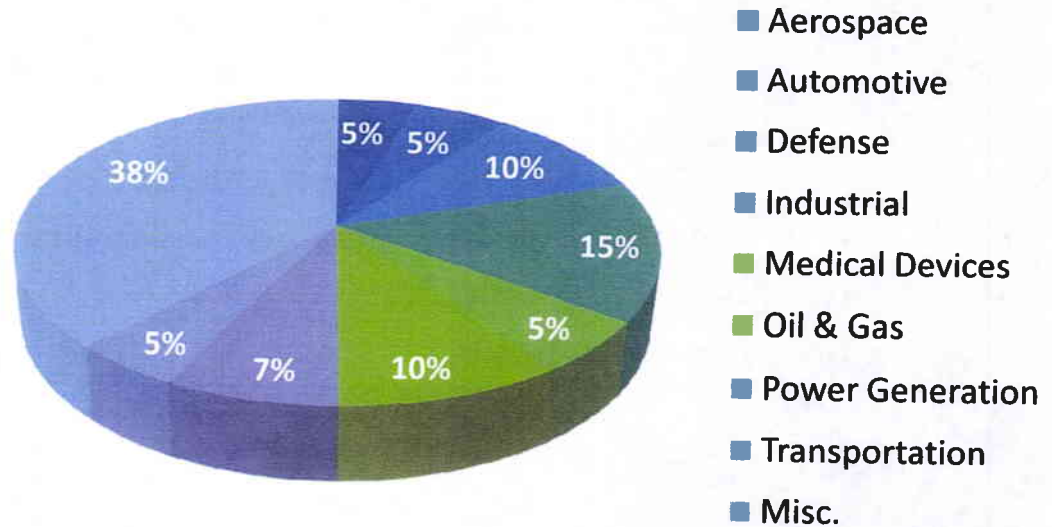
- More than 1,000 target manufacturers were identified in the regional electro-mechanical cluster using the following NAICS:

NAICS Code	NAICS Description	# of Companies Identified
332	Fabricated Metal Product Manufacturing	548
333	Machinery Manufacturing	266
334	Computer & Electronic Product Manufacturing	110
335	Electrical Equipment, Appliance & Component Manufacturing	126

Cluster Demographics

- **Eight Industries make up more than half of the Cluster:**

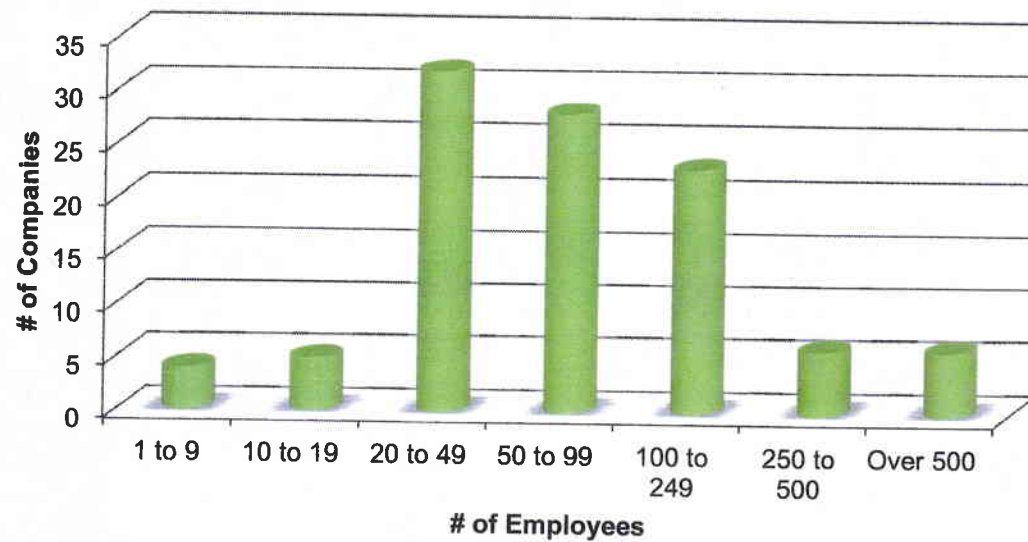
- Defense
- Industrial
- Oil & Gas
- Medical Devices
- Power Generation
- Automotive
- Aerospace
- Transportation



Based on assessment of 89 cluster companies

Cluster Demographics

Cluster Companies by Size

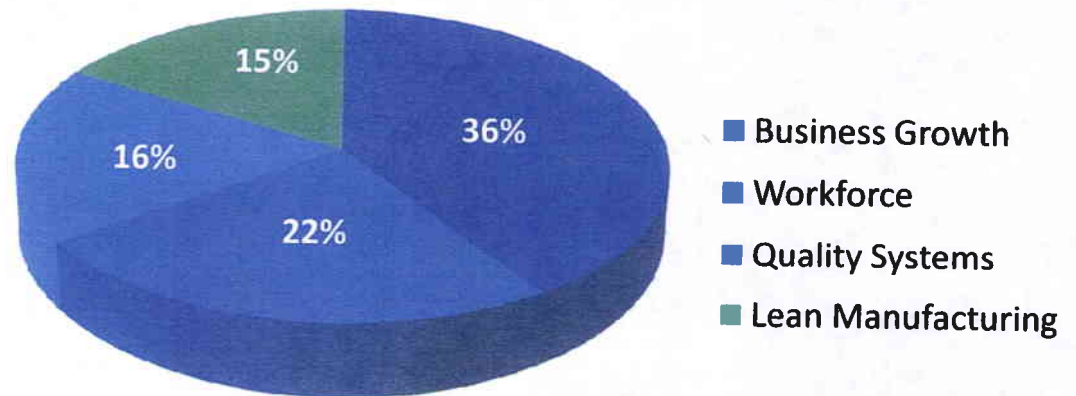


Small manufacturers (less than 249 employees) make up the majority of the cluster

Cluster Needs Assessment

- **Business Growth (36%)**
 - Website Development & Optimization, New Product Development, Strategic Marketing
- **Workforce (22%)**
 - Frontline Leadership, Management Coaching, Team Building, Organizational Development, Hiring Process Improvement, Pipeline Initiatives,
- **Quality Systems (16%)**
 - ISO Certification, Internal Auditor Assistance, Statistical Process Control
- **Lean Manufacturing (15%)**
 - Lean Transformation, Six Sigma, 5S System for Workplace Organization

Cluster Needs

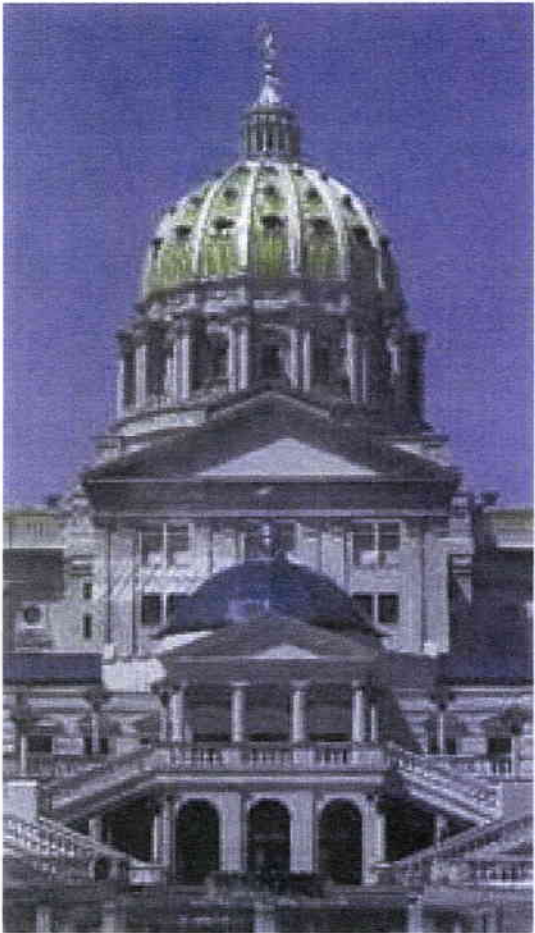


Best of the best - Trends in Manufacturing

- Innovating and linking to our leading research universities
- Pursuing and participating in regional supply chains (energy)
- Demonstrating competitiveness in *reshoring*
- Leveraging advances in high speed internet, cloud computing, social media and looking towards additive manufacturing
- Engaging with schools, students and communities to build the future workforce

Implementing best business practices in marketing, new product development, lean, quality, six sigma, and human resources!

Selected PA State Investments



Selected PA State Investments to Support Needs

- **Economic Development**

- Business assistance through IRC program and PREP
- Innovation support through the CMU/ Lehigh University RAMP programs
- Dedicated investment for special initiatives through D2 PA (ex: reshoring)
- Assisting small manufacturers with exporting
- Infrastructure support to ensure adequate access to physical space, utilities and high speed internet access
- Loan funds, R&D Tax Credits, tax exempt financing

- **Workforce Development**

- Investment in Incumbent worker training programs.
- Support for small manufacturers that host manufacturing oriented apprenticeship programs

Selected PA State Investments to Support Needs

- **Educational Investments**

- Community colleges and PASSHE schools to develop and offer Manufacturing Technology degree programs
- Community colleges to develop and offer manufacturing related certificate programs in machining, welding and robotics
- Improvements to CTEs to enable them to offer up to date manufacturing technology programs, that can be matriculated to community colleges and/or apprenticeship programs
- Support for career awareness in middle schools and high schools to encourage students to explore careers in manufacturing.

- **Tax and Regulatory Policies**

- Favorable policies that enable manufacturers to compete and grow in Pennsylvania.
- Unemployment compensation policies that encourage workers to return to work.
- Streamlined and appropriate regulatory procedures and policies that enable business growth.

Introduction- Catalyst Connection – SW PA IRC

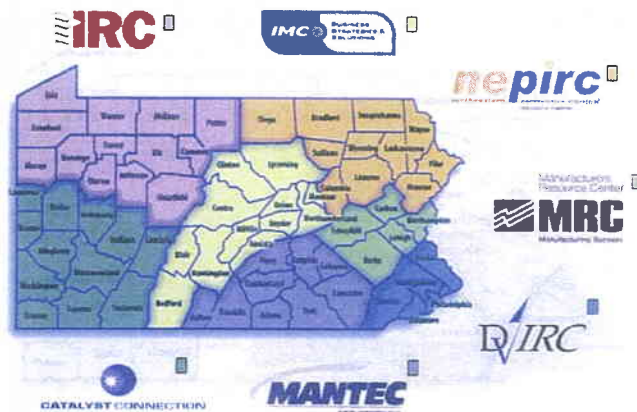
Our Mission:

We help manufacturers compete in a global economy, grow their business and create jobs.

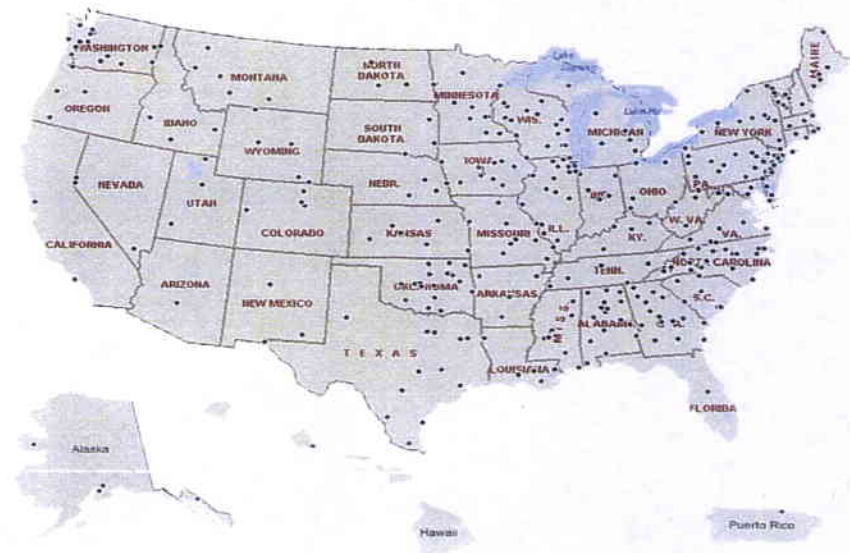
Catalyst Connection is a private non-profit, economic development corporation, established in 1988 and employing 25 people. We receive funding from PA Industrial Resource Center (IRC) program and federal Manufacturing Extension Partnership (MEP) program to support our efforts to provide awareness, training and consulting to the manufacturing community.



Part of a Statewide and National Network



www.mep.nist.gov – or – 800-MEP-4MFG



IRC Five Year Impacts:

- ✓ 4,600 clients served
- ✓ \$5.8B impact
- ✓ 8,000 Jobs Created
- ✓ 24,000 Jobs Retained

Catalyst Connection: Impacts

2012 Economic Impacts:

Sales:	\$321 million
Savings:	\$ 23 million
Investment:	\$ 52 million
Jobs:	1,490



1,490 jobs contribute approximately \$1.7 million of personal income tax

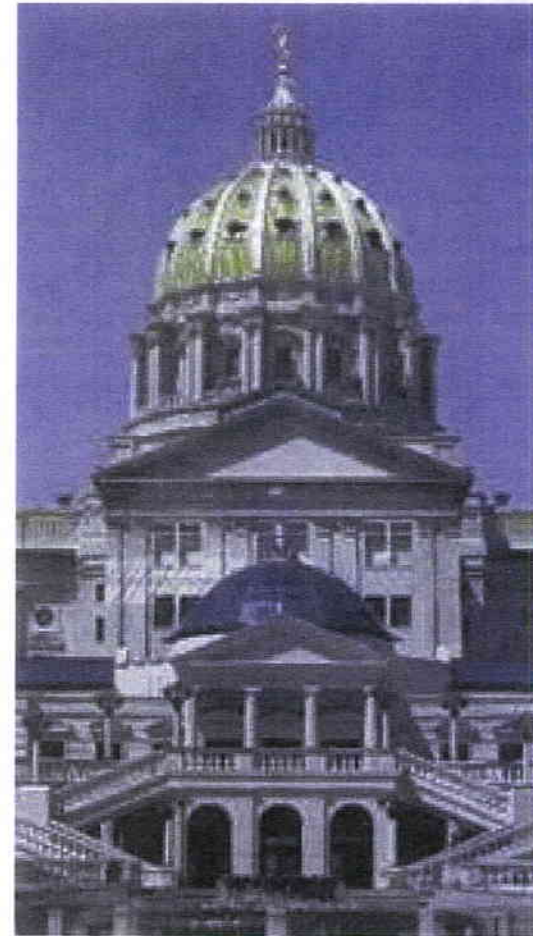
Catalyst Connection: Revenues and Impacts

Revenues for 2012:

- PA DCED: \$1.1 million *
- US DoC: \$1.1 million
- Fees: \$1.5 million
- Other \$0.5 million

**\$1.1 million of state
investment leveraged
\$3.1 million of additional
funding**

* A 60% reduction from 2007



For More Information

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(Observer-Reporter, Aug. 18 [2013]) New program seeks to connect manufacturers, students, by Michael Bradwell

There are roughly 3,700 manufacturers and 120 public high schools in the 12 counties that make up Southwestern Pennsylvania.

While the manufacturing industry is thriving here, there's been a big disconnect among companies with job openings and their ability to interest students in considering what they have to offer.

A new initiative launched recently by Pittsburgh-based Catalyst Connection hopes to connect more high schoolers with the idea that there are not just plenty of jobs, but abundant career opportunities in the region's manufacturing sector.

Catalyst's "Explore the New Manufacturing" program, which is funded by the Claude Worthington Benedum and Alcoa foundations, is designed to give manufacturing employers a pathway and specific tools to connect with youth. Based on its needs, a company can engage with students through short- or long-term opportunities like plant tours, job shadowing, mentoring or e-mentoring, paid summer internships, sponsor-a-project opportunities or longer-term apprenticeships that often lead to jobs.

Catalyst Connection Chief Executive Officer Petra Mitchell said that while manufacturing is vibrant throughout the region, companies here are challenged in finding enough qualified workers in the local labor pool.

"Throughout our region, the manufacturing sector is strong, but its future will depend on the availability of talented workers," Mitchell said. "To allow this industry to continue to flourish, efforts must be made now to change the mindset of young people who view manufacturing as an industry of old, replacing it with a vision of jobs that are high-paying, innovative and in great demand."

"We want to get employers engaged with local schools and get more companies involved with (being able to) find the talent they need," said Scott Dietz, Catalyst's manager of workforce initiatives.

He noted that the difficulty in finding qualified workers for manufacturing has become more acute over the past few years as the oil and gas companies working in the Marcellus Shale have hired away many skilled workers, including welders and machinists.

Looking to the future, Dietz said the challenge of finding skilled workers could grow even more daunting if the proposed Shell ethane cracker plant in Beaver County receives a green light. If a plant is approved by the oil and gas giant, the expectation is that it would create the opportunity for more manufacturers to bring operations to the region to take advantage of the cheap feedstock the plant could produce for making all types of petrochemical products.

An 'interest gap'

The big challenge at the high school level, Dietz said, is what he sees as "an interest gap" among students when it comes to considering a manufacturing career.

He added that some manufacturers have acknowledged that they need to do a better job of promoting themselves and their industry to high school students.

Catalyst Connection, which works with small- and mid-sized manufacturers on a variety of projects from assisting them in streamlining hiring practices to establishing training programs and improving production efficiencies, sees the new initiative as a way to fulfill that shortcoming.

State Rep. Brandon Neuman, D-North Strabane, who two years ago helped to initiate a meeting between local high school guidance counselors and the area's energy industry employers, said Catalyst's latest initiative will drive home an important message about employment opportunities in manufacturing.

"The important thing to remember is that these are careers, they're not just jobs," Neuman said last week.

"This should bridge a gap between the next generation of workers and the companies we have here now," he said.

According to figures provided by Catalyst, the United States has the world's largest manufacturing economy, and produces 18.2 percent of global manufactured products. China is second with 17.6 percent.

Pennsylvania manufacturers employ more than 500,000 workers, and produce 60 percent of new business patents in the state.

The annual wage of a manufacturing employee in the seven-county Pittsburgh Metropolitan Statistical Area in 2011 was \$56,328, nearly 20 percent higher than the average wage.

Catalyst's latest educational endeavor is built upon the success it has had with programs like Adventures in Technology, which since 2002 has connected more than 2,400 area students from 60 high schools and technical schools with more than 60 companies throughout the Pittsburgh region. The students work with local companies on specific, hands-on improvement projects.

Local companies that have participated in the technology program have included Universal Electric in Cecil Township, as well as All-Clad Metalcrafters in Canonsburg.

Dietz said the manufacturing initiative "is designed for the high school level, but we have gone to seventh and eighth grade as part of our pilot program" that began last spring.

Catalyst provides instruction materials for participating companies to use in their presentations to students.