



Model Based Enterprise An MEP Center Perspective

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The MEP Center of Southwestern Pennsylvania

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MEP Overview

The Manufacturing Extension Partnership is a national network of providers that assist manufacturers reduce costs, improve quality and grow revenue.

- Provides consulting and training, utilizing industry best practices
- Receives funding from the National Institute of Standards and Technology (NIST) Manufacturing Extension Partnership (MEP) program
- Consists of 59 MEP Centers having 393 locations in every state and Puerto Rico, employing nearly 1,600 manufacturing professionals
- Affiliated with nearly 2,500 partners, with specialized expertise
- Represented by the American Small Manufacturers Coalition (ASMC), the association of MEP Centers



MEP Results in Western Pennsylvania

- **In 2009 Catalyst Connection:**
 - Communicated monthly with over 1,400 small and medium sized manufacturers
 - Interacted with approximately 1,100 companies to assess needs and provide resources
 - Completed client projects with 230 companies
 - Leveraged state funding to secure federal and client revenues to support regional economic growth
- **Impact reported by clients to NIST in 2009:**
 - Created or retained 950 jobs
 - Increased or retained sales of \$382M
 - Saved \$16M
 - Invested \$27M into their plants



Manufacturing in Pennsylvania

The PA Industrial Resource Centers (IRCs):

- ***Dedicated to serving manufacturers since 1988***
- ***Returned \$1.24 in state tax revenue for every dollar invested***

● Southwestern PA

- \$12 billion in output or 19% of total
- 4,000 manufacturers
- 122,000 manufacturing employees
- \$5.5 billion annual payroll
- Induced impact: \$22 billion

● PA Statewide¹

- “Most Significant Industry”
- 15% of gross state product
- 94% of PA exports are manufactured products
- Productivity growing 50% faster than the national average
- 658,000 manufacturing employees
- \$50,336 in average wages

¹ “Manufacturing in Pennsylvania”, 2008 Industry Report



Catalyst Connection Services

- Productivity and Sustainability: **Bottom Line Impact**
 - Lean: identify and eliminate waste
 - Six Sigma: efficient and effective processes
 - Quality Standards: international (ISO) and industry specific
- Business Growth Services: **Top Line Impact**
 - E-commerce/e-marketing
 - New product development
 - Technology Acceleration
 - Supplier scouting and development



MEP Supply Chain Resources

- The MEP system is uniquely positioned to be the resource of choice for increasing the competitiveness of U.S.-based supply chains
- MEP works with OEMs and large first-tier suppliers to understand their expectations regarding supplier performance
- Suppliers that are lean are highly valued in supply chains because they are faster, more flexible, cost competitive, and less likely to fail
- MEP has a long track record of improving the competitiveness of these suppliers through a wide array of performance improvement service



Small Manufacturers Defense Initiative

- Urgent need to streamline supplier qualification and supply delivery model for prototyped parts expressed by U.S. Army's Armament, Research, Development and Engineering Center (ARDEC)
- ARDEC partnered with Catalyst Connection in 2007 to create the Small Manufacturers Defense Initiative (SMDI)
- ARDEC vision: SMDI would integrate within their current supply chain a pool of qualified suppliers of manufacturing services
- Catalyst Connection and ARDEC have successfully demonstrated a single-point of contact supply model for expansion and integration into additional supply chains



The SMDI Approach to ARDEC Needs

1. Analyze ARDEC's specific supply needs and supplier qualification requirements
2. Create processes and tools that would efficiently identify and qualify Pennsylvania suppliers that meet ARDEC's technical and quality requirements: Supplier Capability Assessment (SCA)
3. Create a business model that integrates within ARDEC's request for quote (RFQ) procurement processes
4. **Technical Data Package Support: to ARDEC and suppliers**





SMDI Lessons Learned

- A practical observation: DoD seeks to be more efficient and cost effective in procurement
- DoD supply chain: runs on more than DFAR and military standards
- ARDEC/DLA project: when able to do so...manufacturers thrive using 3D fully annotated models
- MBE is not new to manufacturing
- **Technical Data Package Challenges: costly and inefficient file management, 2D to 3D headaches, file conversion, validation**
- MEP Centers can facilitate change...for the better



MEP Center Support for MBE

- MBE Assessments
- MBE pilot projects:
 - Actual procurement and manufacturing of parts utilizing MBE technology and processes
 - Supported the production planning processes and company preparation based upon their capabilities and readiness
 - Provided MBE-based communications and guidance with buyers, as well as the manufacturer's own supply chain
- MEP website: the venue that defines MBE, informs and engages all market participants



MEP Center Support - Next Steps

- The MEP Center Role: ready to provide MBE standard testing, training and accreditation services to manufacturers
- Leverage regional and industry specific knowledge, relationships, experience and expertise
- Additional summits, pilot projects
- MBE website enhancements: the informational and interactive resource for MBE for the **entire supply chain**
- We are the Manufacturing Extension Partnership: dedicated **exclusively to support, strengthen and grow U.S. manufacturing**



For Further Information

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