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Pennsylvania Manufacturers Assess Progress on Strategies Required for Future Success

Results of the Pennsylvania Industrial Resource Centers' Next Generation Manufacturing Study Released

For Immediate Release

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Pennsylvania – A ground-breaking survey to assess the global competitiveness of Pennsylvania manufacturers was conducted recently by the Pennsylvania Industrial Resource Centers (IRCs) in cooperation with the Manufacturing Performance Institute (MPI), a leading national research firm focused on manufacturing, our nationwide partners in the Manufacturing Extension Partnership (MEP) at the National Institute for Standards and Technology (NIST), and our statewide participating manufacturers. Our goal was to learn more about how Pennsylvania manufacturers view the future, especially the strategies necessary for manufacturing success within the next five years.

The NGM Survey was conducted on-line from February to April 2009. Respondents were asked to answer 61 questions, typically an investment of 30 minutes. Nearly 400 Pennsylvania manufacturers executed the confidential survey. A high majority (83%) were independent companies. Median annual revenues of the firms were about \$7M. Median employment was just under 50. More than 70% of the responding CEOs were between 40 and 60 years old. In these attributes, those who responded were broadly representative of their peers. Each respondent has received a customized report of their results.

Manufacturers across Pennsylvania identified six core Next Generation Manufacturing Strategies broadly considered essential to future success in the global economy:

- **Customer Focused Innovation:** *Develop, make, and market new customer solutions at a pace faster than the competition.*
- **Talent Acquisition, Development and Retention:** *Secure a competitive performance advantage by having superior systems in place to recruit, hire, develop, and retain talent.*

- **Superior Process Improvement:** *Record annual productivity, quality and customer satisfaction gains that exceed the competition through a company-wide commitment to continuous improvement.*
- **Extended Enterprise Management:** *Develop and manage a network of suppliers and partners that beats the competition by providing greater flexibility, faster response times, and lower costs.*
- **Sustainable Products and Processes:** *Design and implement waste and energy-use reductions at a level that provides superior cost performance and recognizable customer value.*
- **Global Engagement:** *Secure business advantages by having people, partnerships, and systems in place capable of engaging global markets and talents better than the competition.*

The survey addressed four core questions:

- 1) How do Pennsylvania manufacturers rate the importance of each strategy to their future success?
- 2) How do Pennsylvania manufacturers assess their progress on each strategy to world-class performance?
- 3) Through what practices do Pennsylvania manufacturers measure their progress on each strategy?
- 4) To what extent do Pennsylvania manufacturers find regional resources available to support their progress on each of the six manufacturing strategies?

The study reveals that Next Generation Manufacturing strategies are a powerful catalyst for world-class performance and success.

Customer-focused, innovative firms will establish a culture, organization, metrics, partnerships, and investments focused on identifying and translating customer needs into new product and service offerings. The result will be business growth and profitability realized by meeting customer needs in increasingly complex and segmented markets. The NGM Survey indicated that a strong majority, 86% of Pennsylvania manufacturers, rate this strategy as highly important to their success in the next five years. Some 46% rated their performance as world-class (13%) or good (33%). When asked about investment in this strategy, 46% reported spending 1 to 5% of their sales on new product development (slightly above the national average) while 17% spent 6 to 10% of sales, and 12% invested more than 10% of sales for this purpose.

Talent is the key to Pennsylvania's manufacturing future. Many parties must take responsibility for making the skills and knowledge of Pennsylvania manufacturing workers a growing asset in the new economy. The NGM Survey indicated that four-fifths of respondents rated Advanced Talent Management as a highly important (46%) or important (34%) strategy – a finding consistent with most previous research. Once again, these Pennsylvania firms were hard graders of their own progress toward excellence: only 5% consider themselves world-class and only 23% thought that they were making good progress toward that status.

The increase in global manufacturing competition and the **widespread acceptance of lean and quality** implementation throughout the world mean that annual productivity gains considered world-class today will be standard practice in the future. Companies that meet next generation manufacturing benchmarks will need to drive productivity gains of 15% or more just to retain their current market position in the new era of hyper-

competition. Pennsylvania firms were again hard self-graders: 43% thought their progress was above average, but only 8% currently considered themselves world-class.

The progressive SMM of the future will **leverage Extended Enterprises** for competitive advantage by fully exploiting the greater capabilities of expanded networks to gain access to new markets, acquire advanced business capabilities, business resources and business intelligence. This can dramatically increase flexibility and market penetration without significant growth in costs, workforce or infrastructure. Such companies will rebuild their value-chains in re-aggregated networks of lower cost/higher quality suppliers that deliver increasing value and satisfaction to customers. Almost two-thirds of firms (65%) rated Extended Enterprise Management as highly important (33%) or important (32%) to their success in the next five years. Less than one third (28%) felt they were making good progress with the strategy and only a modest 6% believed they were world-class.

The **quest for sustainability** now drives and channels economic growth. Global exploitation of diminishing carbon resources increases each year, spurring demand for renewable and alternative energy technologies. Environmental concerns deepen. Challenged manufacturing managers must respond to rising energy and resource costs. In many corporate growth strategies, sustainability is embraced by manufacturers as an essential goal to balance economic, environmental, and societal challenges and opportunities. A third (32%) of respondents already rate Sustainable Products and Processes as highly important (13%) or important (19%) to their future success. Only 5% believe their current practices are world-class, but another 40% believe they are making good (13%) or average progress toward this goal. Only 1% of firms had achieved annual reductions of energy used per unit of product output by more than 25%. Across all respondents, 9% of products were completely recyclable, 14% were in the 90-99% range, while 60% had product mixes that were less than 50% recyclable.

Only SMM suppliers with distinctive competencies will be invited to support the foreign production of their OEM customers. Only firms of some size or with exceptional products will be able to absorb the often significant costs of partnership in some form with foreign companies. But for the resourceful next generation manufacturer who seeks growth, **Global Engagement** may be an important avenue for growth. Pennsylvania SMMs get the message on Global Engagement. Nearly half of them (47%) rate this NGM strategy highly important (26%) or important (21%) to their future success. One-quarter believe that they are making at least good progress toward distinctive performance; 7% consider themselves world-class already.

For a copy of the executive summary or full report, contact Lauren Bryson at 570-329-3200 x8090 or email her at laurenb@imcpa.com.

ABOUT PENNSYLVANIA IRC'S

The IRCs are affiliates of the nationwide Manufacturing Extension partnership (MEP) of the National Institute of Standards and Technology (NIST) under the U.S. Department of Commerce and supported by the Commonwealth of Pennsylvania, Department of Community & Economic Development. The IRC Network

represents the seven private, non-profit Industrial Resource Centers located strategically throughout the Commonwealth. These Centers were established to help small- and medium-sized **manufacturing** enterprises (SMEs) respond to changing markets, new technology and the competitive pressures of today's global economy.

Working collaboratively, company by company, the Network's mission is to help the commonwealth's manufacturers envision where they want to be and assist them to achieve it.

The Centers strive to keep the manufacturing sector strong, help it grow by assisting manufacturers with improved bottom line strategies – productivity enhancement and waste elimination and with top line growth by supporting strategic initiatives - new and improved products, market differentiation and workforce development strategies.

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