

# Next Generation Manufacturing

## Attributes for Success

Six Next Generation Manufacturing Attributes will define success by 2015. America's manufacturers must achieve world class performance in at least one key attribute and achieve parity with leading competitors in all others.

## 1 Customer-Focused Innovation

*Delivers new and better customer solutions at a faster pace than the competition.*

### Success Benchmarks

- Rapid and recurring deployment of commercial roll-outs and world-class speed-to-market; systemic innovation across the enterprise in products, services and business processes and practices, including staff and partners
- Utilizes unique customer solutions driven by robust market intelligence
- Focuses staff, metrics and investment on product research, development and deployment

Customer-Focused Innovation will drive a culture, organization, metrics, partnerships and investment focused on identifying and translating customer needs into new product and service offerings. **Today's world-class product development will be standard practice in 2015.** Next Generation Manufacturers will streamline the delivery of new products, services or integrated solutions, outpacing the competition. Business growth and profitability will be achieved by meeting increasingly complex and segmented customer needs.

## 2 Advanced Talent Management

*Gains competitive advantage through best practices in talent recruitment, development and retention.*

### Success Benchmarks

- Mines talent and skill recruitment from diverse sources; leverages diversity as a business asset
- Commits to continuous investment in training and education of employees and partners
- Pushes decision-making authority and accountability down through the organization to drive continuous improvement and employee engagement
- Focuses staff, metrics and investment on human capital development and retention

The ability to hire and harness a highly productive workforce will pose increasing challenges as demographic shifts result in the availability of fewer highly-skilled and experienced workers. Manufacturers will source talent globally and increase retention by offering highly-effective programs to train, educate and challenge employees. Employees will become the core asset that drives the business. This diverse, empowered workforce enables businesses to anticipate and adapt to rapid change, practice continuous improvement and increase productivity while accepting accountability for business outcomes.

## 3 Systemic Continuous Improvement

*Achieves recurring enterprise-wide productivity gains that exceed the competition.*

### Success Benchmarks

- Continuously measures performance against world-class benchmarks
- Builds an enterprise-wide culture of a continuous improvement methodology
- Measures continuous improvement at every level and throughout the extended enterprise
- Invests in technology and training to drive continuous improvement

Increased global manufacturing competition and the widespread acceptance of lean and quality implementation mean that annual productivity gains considered world-class today will be standard practice in 2015. Companies achieving NGM benchmarks will drive annual productivity gains of 15% or more to retain market position in the new era of hyper-competition. Excellence in business execution is fueled by continuous, company-wide quality improvement resulting in enhanced business performance and customer satisfaction. The greater agility will stabilize profitability by increasing responsiveness to fluctuations in demand.

# for Success

## 4 Extended Enterprise Management

*Leverages a flexible network of suppliers and partners to provide competitive advantages of speed, cost and quality.*

### Success Benchmarks

- Breaks apart and rebuilds value chains to create better products/services at lower cost while creating new business capabilities
- Establishes a trusted network of partners and suppliers primed to capitalize on opportunities faster than the competition
- Maintains open and continuous communication across the extended enterprise
- Engages suppliers and partners in strategic planning, sharing of customer and competitor information, and response to new opportunities
- Institutes and utilizes metrics and processes for improving extended enterprise performance

Manufacturing continues to disaggregate into sets of internal and external providers of niche functions, such as material suppliers, logistics, accounting, transportation and R&D. The NGM of the future will leverage the extended enterprise for competitive advantage by fully exploiting the capabilities of expanded networks to gain access to new markets, and to acquire advanced business capabilities, resources and intelligence. This practice will dramatically raise the NGM's flexibility and market penetration without significant increase in costs, workforce or infrastructure. Such companies will break apart their value chains, along with the costs and assets contained in them, and rebuild them in re-aggregated networks of lower cost/higher quality suppliers that deliver increasing value and satisfaction to customers. NGM manufacturers will also view government assets and public resources as partners in their extended enterprise.

## 5 Sustainable Product and Process Development

*Integrates environmental best practices into company operations and product development to maximize competitive advantage.*

### Success Benchmarks

- Understands that free market mechanisms reward environmentally sound business practices
- Invests in technologies, production methods and business processes that create resource/cost savings and drive market share
- Builds green and sustainable practices that are best insurance for business continuity and also gain community, employee and social support
- Anticipates and responds proactively to future regulation that penalizes inefficient and wasteful resource use
- Invests in training and technology that reduces material and energy use

In the next 10 years, manufacturers will radically reduce their energy and raw material use and the waste by-products of production. Rising input costs and resource competition make leaner and lower-impact production processes essential. Consumers, governments and entire societies will increasingly reward producers with low environmental impact and punish those that are late adopters of "green" and "sustainable" manufacturing methods. What's more, reaching NGM benchmarks for environmental impact will become both a competitive differentiator and competitive advantage. There will also be many rapidly emerging "green field" opportunities for companies that develop and deliver innovative "green" solutions to this quickly expanding market.

# 6

## Global Engagement

*Secures business advantages through people, partnerships and systems capable of engaging global markets, talent and resources.*

### Success Benchmarks

- Anticipates the threats and opportunities presented by globalization and creates offensive/defensive capabilities in response
- Engages in multiple foreign markets for export, sourcing and partnership opportunities
- Develops and utilizes processes that identify global opportunities and threats
- Engages staff and develops partnerships capable of successfully operating in foreign markets
- Leverages partnerships/alliances for maximum market penetration, complementary business capabilities, business intelligence and opportunity identification

The world market for manufactured goods is increasing at 10-15% per year while the US demand for manufactured goods is increasing at 3-5% per year. The most rapid growth of competitors is coming from overseas<sup>1</sup>. The manufacturer of 2015 will operate in a fully global environment and will need a global sell/source strategy to succeed. The successful NGM will be proactive and engaged globally as a means to drive growth and profitability.

#### Notes

- 1 International Comparisons of Manufacturing Productivity and Unit Labor Cost Trends, 2007, Bureau of Labor Statistics, US Department of Labor, 2007.

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2601 Crossroads Drive, Suite 145  
Madison, WI 53718-7923

Phone: 877-856-8588 Email: [results@wmep.org](mailto:results@wmep.org)



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