

NGM Study Reveals Opportunities for U.S. Manufacturers to Excel



In the two years since the last Next Generation Manufacturing (NGM) Study, U.S. manufacturers have seen major gains in revenue and profits, leading the economy back from the abyss of the Great Recession.



Yet the 2013 NGM Study finds that most of these manufacturers — successful as they are *today* — aren't investing in the strategies that will carry their firms into *tomorrow*. This is worrisome, because to prosper into the next generation, manufacturers must embrace and support six NGM strategies:



Manufacturing Performance Institute

- *Customer-focused innovation*: Develop, make, and market new products and services that meet customers' needs at a pace faster than the competition.
- *Engaged people/human capital acquisition, development and retention*: Secure a competitive performance advantage by having superior systems in place to recruit, hire, develop, and retain talent.
- *Superior processes/improvement focus*: Record annual productivity and quality gains that exceed the competition through a companywide commitment to continuous improvement.
- *Supply-chain management and collaboration*: Develop and manage supply chains and partnerships that provide flexibility, response time, and delivery performance that exceed the competition.
- *Sustainability*: 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.

NGM Execution Gaps threaten U.S. competitiveness

Although most manufacturers recognize the importance of NGM strategies, few have made progress toward world-class status in implementing them.

In fact, the 2013 NGM Study identifies an enormous execution gap — the difference between the number of firms that recognize the importance of a particular NGM strategy, and the number of firms that have come close to or achieved world-class status in that strategy. For example, while 90% of manufacturers believe process improvement is important or highly important,¹ only 44% of manufacturers are near or at world-class status in process improvement² (Figure 1).

¹ Rated 4 or 5 on a scale of 1-5 where 5 equals highly important.

² Rated 4 or 5 on a scale of 1-5 where 5 equals world class.

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These execution gaps — across all six NGM strategies — represent a substantial barrier to long-term success for U.S. manufacturing.



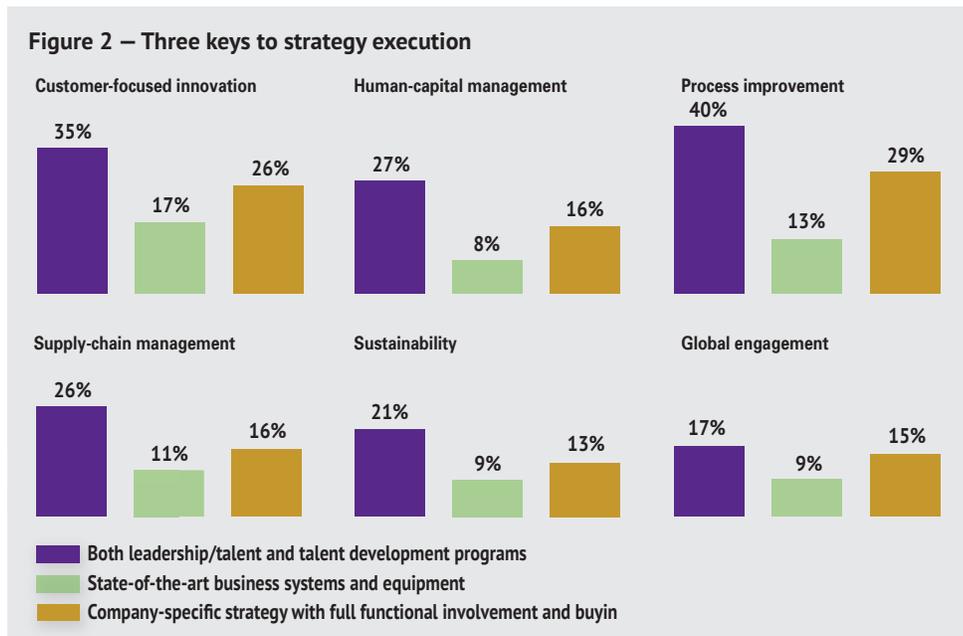
Years of underinvestment leave many manufacturers unprepared

Cost controls and belt-tightening during the Great Recession forced many manufacturers to cancel or delay investments in the future. This means that many manufacturers lack critical success factors necessary to achieve world-class status — talented people, state-of-the-art business systems and equipment, and company-specific strategies (Figure 2). Without these success factors, manufacturers face serious competitive disadvantages:

- Leadership/talent and talent-development programs:* Manufacturing executives frequently lament a talent shortage. But NGM data indicate that few are taking the initiative to actually address talent gaps. For example, 69% of manufacturers have the leadership and talent to drive world-class customer-focused innovation, but only 37% have the talent-development programs to support world-class customer-focused innovation. Only 35% have both talent and programs in place — and 28% have neither talent or development programs in place.
- State-of-the-art business systems and equipment:* Most manufacturers have the tools and technologies they need *today*, but those tools won't meet the needs of the future. For example, 67% of executives report that their organization has business systems and equipment to support “current requirements” for world-class supply-chain management. Yet only 11% describe their tools as “state-of-the-art” and capable of providing long-term support. Nearly one in five manufacturers report inadequate or no systems and equipment to support supply-chain management.
- Company-specific strategy with full functional involvement and buy-in:* Few manufacturers have invested the time and effort to craft strategic visions for their firms and then motivate and inspire employees to contribute to, support, and execute the strategies. For example, only 16% of manufacturers have a company-specific strategy with

full functional involvement and buyin for world-class human-capital management; another 46% have a company-specific strategy with some involvement and buyin. But 11% of manufacturers have no strategy for human-capital management.

This underinvestment and inability to support the NGM strategies is damaging to individual manufacturers and U.S manufacturing, in general, because the combination of the *right* talent, the *right* tools, and the *right* plan is the secret to success. For example, 79% of manufacturers with the talent and talent-development programs, state-of-the-art systems and equipment, and a company-supported strategy for customer-focused innovation³ were at or near world-class status for the strategy — vs. only 23% of manufacturers that lacked the talent, tools, and plan.



New U.S. Manufacturing leaders are about to step in

One-third of manufacturing executives (33%) anticipate a planned leadership succession in the next five years, and another 28% of executives indicate a succession may occur. The percentage of planned successions continues to rise among manufacturers — 30% in 2011 and 25% in 2009 — and with a healthier economy and, thus, better-performing retirement plans, the swell of baby boomers entering retirement age could end up pushing even more executives into manufacturing leadership roles, ready or not.

This means that U.S manufacturing is at an inflection point, with a new generation about to take the helm at companies across the country. Making sure that this generation of leadership is well-trained in the NGM strategies will be critical to the long-term success of these firms — and the sector.

³ 19 manufacturers

U.S. manufacturers look for help beyond their own walls

Manufacturers routinely seek external support from outside organizations in dealing with a range of activities. Not surprisingly, larger manufacturers (based on revenues) with deeper pockets are more able to look for external support than smaller organizations. For example, 71% of manufacturers with \$100 million or more in revenues get support as needed or on an ongoing basis for strategic planning vs. 52% of manufacturers with revenues of less than \$10 million (*Figure 3*).

Figure 3 – Seeking External Support*

| | All respondents | Less than \$10 million | \$10 million to \$99.9 million | \$100 million or more |
|-------------------------------------|-----------------|------------------------|--------------------------------|-----------------------|
| Regulatory/compliance issues | 72% | 67% | 72% | 80% |
| Workforce skills development | 69% | 57% | 78% | 80% |
| Operations improvement (e.g., lean) | 69% | 62% | 71% | 87% |
| Strategic planning | 56% | 52% | 56% | 71% |
| Business development | 54% | 51% | 57% | 53% |
| Innovation/R&D | 52% | 49% | 47% | 73% |
| Government credits/grants | 44% | 41% | 46% | 47% |
| Supply-chain development | 37% | 32% | 36% | 49% |
| Global sales and/or procurement | 34% | 25% | 37% | 44% |
| Sustainability initiatives | 27% | 23% | 24% | 47% |

* as needed or on an ongoing basis

A majority of manufacturers that have used outside resources report *positive impact* from industry associations (55% of manufacturers); state manufacturing associations (including Manufacturing Extension Partnerships) (55%); and consulting firms (54%). Manufacturers looking to implement NGM strategies don't need to go it alone. A wide array of organizations — public, non-profit, and private — are already helping thousands of manufacturers to implement NGM strategies.

About the Next Generation Manufacturing Study

The NGM Study is a biennial survey conducted by the Manufacturing Performance Institute (MPI) with the American Small Manufacturers Coalition (ASMC), an association of manufacturing extension centers that work to improve the innovation and productivity of America's manufacturing community. One ASMC program of primary focus is the National Institute of Standards and Technology (NIST) Manufacturing Extension Partnership (MEP) program. The Association for Manufacturing Excellence (AME) also supported the 2013 NGM Study.

This report was based on preliminary findings from 375 responses to the 2013 NGM Study, received in August and September of this year via an online questionnaire. Many MEPs across the United States and AME promoted the study. Responses to the NGM Study were received by MPI, then entered into a database, edited, and cleansed to ensure answers were plausible, where necessary. All respondent answers to the survey are confidential.

The Manufacturing Performance Institute, part of The MPI Group, serves leaders with research, advice, and performance-targeted solutions that provide a competitive advantage in today's fierce marketplace. MPI combines the disciplines of research, strategic advice, knowledge development, and hands-on leadership to create a difference — in performance, in profits, and in the people who make them possible.