

1. Attracting and Retaining a Quality Workforce

Productivity challenges exist when a manufacturer can't retain a consistent workforce. Manufacturing companies today have a hard time finding employees who will show up and be on time for work and stick with their jobs. When it's hard to find reliable personnel, employers have to spend excess time hiring and training new employees, then rehiring and training new employees. While manufacturing firms are doing what they can to inspire a new generation of manufacturing employees and experts, there is still a considerable void when it comes to skills and experience. Manufacturers need to work with schools and universities in their communities to ensure that manufacturing focused subjects are being well promoted and taught. In addition, manufacturers need to bridge the gap by encouraging their older employees to gradually slow down to retirement, passing on valuable skills to younger employees during a transition phase.

2. Cybersecurity

Manufacturers need to be proactive in cybersecurity by implementing effective controls to prevent and detect cyber-crime. Education of employees of potential phishing schemes is paramount to a successful cybersecurity campaign. Potential effects of a network infiltration include shut down of operations, theft of sensitive customer information, or theft of sensitive banking information.

3. Big Data Management and IT Infrastructure

Manufacturing involves a great deal of data and reliance on IT systems. Many companies are unsure of how to access and use that data to leverage positioning within a competitive market. In order for manufacturers to leverage their data properly, they must study data management opportunities and challenges, identify data management abilities, and prioritize data analysis plans. Additionally, manufacturers need to do an IT assessment to determine if investments need to be made to advance the company through more effective systems that facilitate data analysis.

4. Product Development and Innovation

All manufacturers are cost conscious but should not miss out on well supported R&D opportunities. The global marketplace puts an emphasis on product development and innovation. Focus is needed to manage the innovation process and allow for a good flow of new product ideas and innovations to enhance future success.

5. Regulation Compliance and Traceability

The manufacturing sector faces increasing regulation and compliance measures. Inconsistent regulations from state to state and country to country present competitive challenges. Manufacturers must have complete visibility throughout their supply chain for their own compliance and that of their suppliers. Compliance can include everything from product safety to IT security to fair competition.

6. Safety, Including Overtime Management

Safety is a major concern for manufacturers as their employees routinely work around heavy equipment. Poor equipment maintenance can cause health and safety issues, as well as cause unplanned or excessive downtime. Manufacturers need to perform preventive maintenance on recommended schedules to keep operating costs low and throughput high while helping to ensure worker safety. Additionally, the monitoring of overtime hours to help protect the safety of employees represents an important oversight role and a vital way to control costs.

Source: National Association of Manufacturers' 2016 Manufacturers Outlook Survey, *Tom Bonine, President of National Metal Fabricators*

