



Aberdeen *Group*

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There is No Execution without Integration

MES Adoption Drives Performance

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Executive Summary

Many manufacturers today are getting caught on the wrong side of a technology adoption wave that is quickly gaining momentum. Of the more than 200 surveyed manufacturers 54% are planning on adopting MI (Manufacturing Intelligence) within the next 24 months. Additionally, 56% of manufacturers having already implemented MES (Manufacturing Execution Systems) did so within the past two years. Moving forward, it is important that manufacturers embrace technology in order to either solidify or gain competitive advantages. However, in the many fast paced, low-margin, environments that make up the manufacturing industry it is crucial that manufacturers do not adopt technology for technology's sake. This benchmark is a roadmap for reducing overall manufacturing costs through the utilization of manufacturing technologies.

Best in Class Performance

Aberdeen used five key performance criteria to distinguish Best in Class; these manufacturers averaged the following performance across the five KPIs:

- **98%** On Time Delivery with a 9% improvement year over year.
- **88%** Throughput with a 10% Improvement year over year.
- **3** Stock Outs averaged per line per week with a 52% Improvement year over year.
- **2.9%** Direct Material Usage Variance with a 50% Improvement year over year.
- **61%** Work In Process Reduction year over year.

Competitive Maturity Assessment

Survey results show that Best in Class performers shared several common characteristics with respect to Manufacturing Execution Technology strategies:

- Best in Class manufacturers are 52% more likely to utilize MES, three times more likely to utilize MI, and 61% more likely to integrate MES with ERP.
- 77% of Best in Class manufacturers utilize automated data collection for production, inventory, and quality data and are 67% more likely than other manufacturers to provide this data to the necessary job roles for effective decision making.

Required Actions

In addition to the specific recommendations in Chapter 3, to achieve Best in Class performance manufacturers must:

- Focus on efficiency and cost reduction by adopting MES or MI and integrating with ERP.
- Utilize production scheduling optimization, quality assurance and control, and work in process resource management functionality.
- Measure On Time Delivery, Throughput, and Manufacturing Cycle Time; ideally in real time and at a minimum daily.
- Adopt automated data collection and dashboard visualization for production, inventory, and quality data.

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