

# IMPLEMENTATION STRATEGIES

*for Horizontal Material Handling*

HOW TO ACHIEVE SAFETY, COST  
AND PRODUCTIVITY GAINS THROUGH  
MOVEMENT MODERNIZATION



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## Executive Summary

Despite record-high output, new demand continues to stretch the resources and capabilities of manufacturing and warehouse facilities. To keep up, facility managers are investing in modern processes and technology, such as horizontal material handling, to improve productivity and speed responsiveness.

Implementing these new material movement strategies requires careful planning to enhance, not disrupt, operations. Organizations can maximize productivity and meet aggressive growth goals by utilizing established implementation strategies that account for planning, design, system integration, and workforce training. By combining these strategies with continual performance measurement, organizations can meet today’s challenges—and position themselves for future growth and performance.



# Introduction

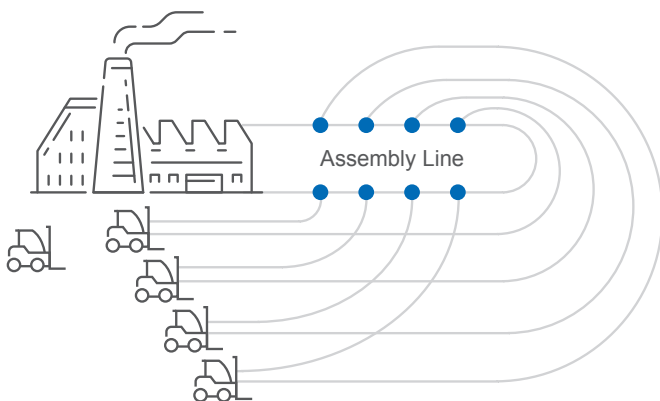
## Laying a Lean Foundation for Operational Growth

The future outlook for the manufacturing industry looks bright. According to one executive survey, more than half of manufacturing leaders surveyed expect their revenue to grow by 5% or more annually over the next five years.<sup>1</sup>

Yet, critical challenges—including rising material costs, strain on manufacturing capacity and increasing labor costs—threaten to derail these encouraging projections. To continue to meet revenue targets, facility managers are increasingly adopting lean manufacturing techniques to overcome challenges and achieve sustained growth in both productivity and efficiency.

While each manufacturer may define it slightly differently, the concept of lean manufacturing can be distilled down to one, simple goal: to eliminate waste from the manufacturing process. In manufacturing facilities, waste can take many forms—from unnecessary transportation to extended wait times between deliveries. Yet, each of these wastes reflects the same root cause: inefficient transport tying up labor and equipment, while under-utilizing both resources.

In response, leading organizations have begun to implement modern horizontal material handling practices to maximize their operational potential.



### Identifying Facility Waste

Due to their limited load capacity, forklifts must make frequent trips, which can lead to route congestion and safety issues.

## WHAT'S HORIZONTAL MATERIAL HANDLING?

For years, facility managers have failed to differentiate between their vertical and horizontal material handling and movement—using forklifts for both stocking and transporting goods in the warehouse. Horizontal material handling, which emphasizes the use of right-sized, task-matched tow tractors and industrial cart systems to transport materials and goods between cells, allows manufacturers and warehouse managers to reimagine their operational footprints—reducing equipment and labor costs.

While the details of successful horizontal material handling implementations tend to be dictated by the unique environment, objectives and existing workflows in a facility, proper implementation can be broken down into four basic steps:

- 1 Plan and design
- 2 Integrate information systems
- 3 Train workforce
- 4 Measure performance (including continuous improvement)

This whitepaper will explore each of these steps—including the systems, equipment and strategies associated with each one—to help manufacturers extend the advantages of lean manufacturing to material movement processes.

1. IndustryWeek Special Research Report: [https://www.nist.gov/system/files/documents/2016/11/16/iw\\_kronos\\_research\\_report\\_2016.pdf](https://www.nist.gov/system/files/documents/2016/11/16/iw_kronos_research_report_2016.pdf)