



To Automate or Not to Automate

**8 Operational Considerations When
Determining Whether to Automate
Your Distribution Center**

The rapid growth in SKUs is creating challenges for wholesalers and distributors to make informed operational decisions. This situation highlights the need for smarter utilization of labor, equipment, and technology. Key drivers for automated distribution include cost savings, labor efficiency and space constraints. Automation has become a primary strategy for achieving supply chain productivity and fiscal goals while enhancing customer service levels.

Automating warehouse and order fulfillment operations has become the primary strategy to ensure the realization of supply chain productivity and fiscal goals while maximizing customer service levels.



Here are eight operational considerations to drive organizational competency for automated distribution systems.

1. Improving Order Accuracy

In the current competitive landscape, there is an ever-increasing number of available products and demand for more frequent and smaller deliveries. The need for timely and accurate order fulfillment is of paramount importance. A decrease in order accuracy of several tenths of a percentage point can be disastrous to a company's bottom line and customer service levels.

Automating distribution operations can immediately increase an organization's order accuracy anywhere from half a percent up to several percentage points. Businesses that automate realize a significant reduction in operational costs and a measurable increase in service levels, which have an immediate impact on overall profitability and a long-term positive effect on market share growth.

Detailed Insight:

- **Impact on Customer Satisfaction:**
Higher order accuracy leads to fewer returns and complaints, improving customer loyalty and satisfaction.
- **Reduction in Costs:**
Accurate orders mean less rework, lower return shipping costs and less inventory shrinkage.

2. Managing SKU Proliferation

The term SKU proliferation has become ubiquitous in distribution and warehousing. Consumer choice and an increase in the demand for variety is driving a record number of product choices to the marketplace, effectively flattening SKU velocities and requiring distribution operations to effectively handle thousands of fast- and slow-moving SKUs with equal efficacy and throughput.

Implementing automated distribution permits an organization to manage the growing number of SKUs while decreasing the amount of travel time required by associates to fulfill orders. This increases product selection efficiency, reduces labor costs and allows for alternate ways to store inventory.

Detailed Insight:

- **Handling Complexity:**
Advanced automated systems can categorize SKUs by velocity, ensuring optimal storage and retrieval strategies.
- **Dynamic Storage Solutions:**
Automation allows for dynamic storage, where SKUs are stored based on demand patterns rather than static locations.



3. Optimizing a Distribution Center's Cube Utilization When Expansion Is Not an Option

With SKU proliferation comes the challenge of where to store the product. Increasing real estate costs are driving companies to find ways to better maximize and utilize their current facilities. Effective implementation of automation can help businesses better leverage their available DC cube.

Current automation technology can effectively store, condense and retrieve product while increasing vertical utilization and reducing horizontal storage footprint. This is particularly applicable for slow moving SKUs, which can take up the most space even though there is not much inventory on hand. Optimizing your distribution center cube through automation can allow for a 20 to 30 percent decrease in the storage footprint which can then accommodate future growth of SKU count and defers the need to expand existing buildings or relocate existing operations to new, larger facilities.

Detailed Insight:

- **Vertical Storage Solutions:**
Automated storage and retrieval systems (AS/RS) and shuttle systems maximize vertical space.
- **Flexibility and Scalability:**
Automation allows facilities to scale operations without physical expansion, providing flexibility for future growth.

4. Realizing Real-Time Order Visibility and Management

The emergence of networked mobile devices in the workplace has enabled management to monitor real-time operational information without being tethered to a workstation. Product movement, inventory status, performance metrics and process bottlenecks are available anytime, anywhere, allowing for better and timelier management of order fulfillment activities and labor resource assignment.

In order to eliminate blind spots and properly manage inventory, combining mobile access with state-of-the-art data collection devices and performance benchmarking software packages, businesses can successfully realize real-time visibility into daily operations which permits proactive, on-the-fly, operational adjustments that improve productivity and help to avoid potential performance pitfalls.

Detailed Insight:

- **Data-Driven Decisions:**
Real-time data allows for better decision-making, identifying trends and addressing issues before they escalate.
- **Integration with Other Systems:**
Integrating with enterprise resource planning (ERP) and transportation management systems (TMS) enhances overall supply chain visibility.

5. Implementing Store and Aisle Ready Fulfillment

Any time labor can be effectively reduced at retail stops, distributors and retailers benefit alike. Distributors can reduce demands on drivers at stops, which increases delivery productivity. Retailers realize significant reductions in stocking labor in-store. Both parties realize increases in accuracy which benefit the consumer and improve customer satisfaction.

Distribution automation allows for more efficient sorting, queuing, consolidation and tracking for operations that have implemented store/aisle ready order fulfillment. The benefits of automation in implementing store and aisle ready order fulfillment can significantly increase an organization's competitive advantage.

Detailed Insight:

- **Efficiency Gains:**
Automation streamlines the process from order picking to delivery, reducing errors and increasing speed.
- **Enhanced Customer Experience:**
Accurate and timely deliveries improve the end-customer's shopping experience, increasing satisfaction and loyalty.

6. Lowering Freight Costs

Automation is not necessarily just mechanization within the four walls of a distribution center. The implementation of an effective warehouse management system (WMS) can mean better management of freight costs and your overall business. An appropriately implemented WMS can offer detailed truck load planning and fleet management, which will increase truck cube utilization, optimize routes and provide significant reductions in freight-related costs.

Detailed Insight:

- **Route Optimization:**
Advanced algorithms can optimize delivery routes, reducing fuel consumption and delivery times.
- **Load Consolidation:**
Automation can improve load consolidation, maximizing truck space and reducing the number of trips required.

7. Implementing the Right Software Platform

Supply chains operate on two main components: speed and efficiency. Therefore, a real-time warehouse management system (WMS) that can provide product movement, inventory status, performance metrics and process bottlenecks needs to be operating at peak proficiency in order to maintain visibility and management of inventory.

An effective WMS not only contributes to lowering freight costs exponentially but also warehouse operations in general. Automating warehouse operations with a WMS can help you carry less of the wrong inventory by creating real-time visibility.

Detailed Insight:

- **Customization and Flexibility:**
A robust WMS can be customized to meet specific business needs, providing flexibility in operations.
- **Integration Capabilities:**
Seamless integration with other supply chain systems ensures smooth data flow and operational efficiency.

8. Improving Worker Safety and Ergonomics

In non-automated fulfillment facilities, associates often bend, twist and reach hundreds of times during a shift while lifting, placing or lowering heavy product. Most of these repetitive movements completely disregard proper ergonomics and can increase the likelihood of injury that results in missed time, workman's comp claims increased associate turnover rates.

Automating and standardizing warehouse labor practices can provide ergonomically ideal working conditions where associates' movements are carefully choreographed, and the most potentially hazardous movements are greatly reduced or eliminated. The proper implementation of automation and best labor practices has consistently proven to lower the number of work-related injuries, increase productivity, improve associate satisfaction and lower labor costs.

Detailed Insight:

- **Health and Safety:**

Automation reduces physical strain on workers, decreasing the likelihood of injuries and improving overall health.

- **Workforce Retention:**

A safer work environment leads to higher employee satisfaction and retention rates.



Conclusion

While automation and mechanization involve upfront costs, they can yield significant returns when properly designed and implemented. Balancing people, processes and technology is key to finding the best solutions for your requirements, leading to cost savings and the ability to serve a broader market effectively. Embracing automation can position your distribution center for long-term success, enhancing efficiency and productivity.



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