



white paper

12 Factors Driving Food and Beverage Warehouse Automation

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Introduction

What is driving food and Beverage retailers and wholesalers to automate?

Retailers and wholesalers are requiring increased productivity and improved cost effectiveness in the distribution supply chain to remain competitive. Consumers are demanding more choice, are becoming more price conscious, and are more willing to switch allegiances in order to get better value. Few retailers can command a significant price premium these days. Automation in the warehouse and distribution center is one strategy to reach productivity and cost goals. This white paper will identify 12 factors - from bio-mechanical injuries and harsh working environments to space utilization and strategy for slow movers - which are driving the need to increase the use of automated systems.

Factors Driving Automation

1. Bio-Mechanical Injuries

Food and beverage distribution centers primarily handle case goods. Case goods tend to be heavy, especially when a worker handles these case loads for an entire shift of operation. Workers will bend, lift and twist hundreds of times a day while handling cases of food product. Injuries can be devastating to the health of workers, not to mention medical and absentee costs. Also, turnover rate in these job functions can be high.

2. Need for Speed and Accuracy

Orders for product must be processed, picked, and shipped with ever increasing speed. The trend remains, smaller shipments more often. Accuracy in order fulfillment is of vital importance. Picking errors cannot be tolerated from a customer service and cost standpoint.

3. Spikes in Throughput

Seasonal increases in throughput rates require the addition of seasonal labor. Seasonal labor can be difficult to hire, train, motivate and manage.

4. Growth of Slow Moving SKUs

With SKU proliferation, and increases in the volume of product going through a distribution center, there is more pressure to accommodate slow movers more efficiently. Slow movers, which make up the majority of SKUs, are taking up more and more space, and require their own pick face.

5. Real-time Control

More and more information in real time about product movement and product attributes is required to optimize the supply chain. Distribution center managers need to know exactly where every item is located in the distribution center and the ongoing status of the order fulfillment process.





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Factors Driving Automation (Cont.)



6. Harsh Working Environments

Freezer storage often requires that product be held in sub zero temperatures. This environment is not ideal for worker comfort and health. Legal restrictions require that workers can only be exposed to a freezer environment for limited periods of time, thus increasing costs; turnover rate is also high in these job categories. In addition, freezer space is costly to build and maintain; solutions that can minimize freezer space are ideal.

7. Space Utilization

There are increasing demands to “use the cube” and provide more productivity in less space. New food distribution centers will need to provide more throughput in a smaller building footprint. Existing food distribution centers are being asked to deal with more and more SKUs at a greater velocity within the existing building footprint.

8. Store Ready

Food retailers need to reduce in-store labor requirements and reduce the time it takes to restock shelves with product. Product shipped to the stores needs to be more “store ready”. Therefore items need to arrive at the store pre-sorted and grouped by product family.

9. Multi-Format Retailing

Retailers are operating numerous store formats in an effort to target consumer demographics. This requires fulfillment systems with greater flexibility in order to meet significantly different order profiles.

10. Reduced and/or Green Packaging

Environmental awareness will affect the cost, type, and quantities of packaging (and packing materials) used in the supply chain. A move toward all-belt conveying solutions (vs. roller) will provide better handling of packaging that is less robust, as well as small and irregular-shaped items.

11. RFID Integration

The transition to RFID labeling of pallets, cases, and items affects the methods in which product is received, put-away, picked and shipped. As these methods are re-designed for integration with RFID, new and more efficient material handling techniques should also be considered.

12. Transportation Costs

Rising oil prices will drive improved fleet management, and also warehouse operations. Warehouse Control Software (WCS) with order management functions will optimize order consolidation, as well as trailer loading for better density.



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Conclusion

Automated material handling system solutions, software and controls can be applied to every issue mentioned above. Automation can be utilized at varying degrees to achieve improvements in product flow, labor allocation, facility size and overall operating costs. The technology most often utilized includes warehouse management systems software (WMS), warehouse control system software (WCS), voice and light directed order fulfillment, automated storage and retrieval systems (ASRS), package and pallet conveyor, sorters, and trailer loaders.

ASRS along with WCS software can be applied in various areas. The most appropriate areas to consider include put-away functions, product storage (especially in a freezer) and replenishment of the pick modules. Therefore, the number of “touches” by worker can be dramatically reduced. This addresses the bio-mechanical and harsh environment issues. Also, ASRS maximizes use of cube space reducing the overall system footprint. Furthermore, ASRS can accommodate slow movers. When slow movers need to be picked, the ASRS can create “variable pick faces” in a pick module. After the slow mover is picked, it is sent back to a reserve storage location thereby not requiring an active pick face.

Automated systems can provide high throughput rates and reduce the need for seasonal labor as well as increase the speed in which orders are processed. Voice and light directed order fulfillment systems dramatically increase order picking accuracy while speeding up the process. WMS and WCS software along with sortation systems allow loads to be grouped by product family before shipping.

Today’s distribution centers can raise the bar on productivity while reducing costs, speeding up the process, and improving customer service through the effective application of automation and software solutions.

About Dematic

Through an integrated approach to process, IT, technologies & professional services Dematic develops best practice logistics systems for production, warehousing, and distribution operations. The engineered solutions are built around process improvements, material handling automation, controls & software. Technologies include light and voice directed order fulfillment, storage/staging systems, conveying & sorting systems, trailer loading systems, WCS software, controls, Quick Tag RFID compliance systems, and performance management software.

Throughout our years in business, from Rapistan to Dematic, our focus has been on customer satisfaction.

If you are interested in learning more about this topic and how we can help automate your distribution center, please contact Dematic at (877) 725-7500.

Continuing the *Rapistan* Tradition

