

# **Warehousing: A Work in Progress**

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## The continued progression of warehousing...

Over the past 40 years, warehousing has seen major enhancements in accuracy and speed made possible by advances in lift trucks, product identification, and radiofrequency communications. Much of the improvements were a result of software controls, first with companies writing their own software, and later with standard enhanced processes and packaged warehousing systems.

Even with these advancements, accuracy and efficiency of warehousing remains, although improved, still a critical issue. Many of the recent software improvements have targeted the kind of errors people make and the time it takes to solve them. Now organizations have embraced labor management systems, which leverage complicated engineering standards to track and measure the performance of operators. Yet, performance issues persist and inaccuracies continue. These problems infiltrate into many areas, causing a deteriorating cascading domino effect:

- Time-consuming, expensive error reconciliations
  - Putting in programs to check the checker
  - Extensive cycle count programs and practices
- Customer pain (internal or external)
  - Customer dissatisfaction
  - Service level agreements or contractual obligation fines
  - Delays and accuracy complaints
  - Replacement shipments (returns and replacements)
- Lack of confidence in what shipped and what is stocked
  - From the customer and from operations
    - Second guessing and need for extra verifications
- Slower fulfillment times
  - Dock congestion
  - Causing trailer delays and demurrage fees
  - Slower invoice payments
  - Additional overtime or added staffing
  - Spiraling dock order fulfillment confusion
- Increased safety stocks to compensate for anticipated issues
- Increased overtime to clear the backlogs

So what's the next frontier in warehouse management improvements? How can the current levels of accuracy and efficiency be improved? What is the root cause of this continuing problem?

## Warehouse Challenges: Load and Location

Load mis-identification is the primary cause of missed ships, while location mis-identification is the root cause of misplaced product and delays in shipping. Many problems found in warehousing using today's WMS systems are related to operator error and system limitations:

1. **Put away** is a root cause of many pick errors. The primary reason this occurs: the operator scans location "A" (where it should go) and puts it in location "B." Frequently, the location scheme is the problem, with locations that are not intuitive or a totem pole location system that is difficult to determine the correct totem scan versus the actual location, sometimes 20+ feet away. Even when long-range scanners are used, errors in placement persist.
2. **Picking** is another source of problems. When operators need to move pallets out of the way to retrieve a specific pallet, the pallets being shuffled generally do not get updated in the system. If the operator remembers to put them back, everything is fine. However, since warehouses are busy and emphasize labor tracking, these shuffles are often not replaced as they were found.
3. **Staging** pallets either inbound or outbound are loaded with risk. Fluid staging areas are often shuffled around to determine set up of proper loading placement or to move out specific loads that are ready for the next step. Again, these shuffles are not tracked by any system.
4. **Shipment** loading is also a root cause for many ship errors. The process is designed for operators to scan each pallet while loading; however, many operators find this tedious and often batch scan several pallets and load them. Even the most disciplined operation has operators who think this method is faster. Even when the correct process is used, missed scans occur. There's no question that this process is problematic, when a pallet that has not been scanned is loaded, or a scanned pallet is left behind.

Generally, many of these challenges can be resolved with an aggressive cycle count program, combined with inventory control measures such as manual order audits, to ensure customer load accuracy. These resolutions correct the error that has occurred; however, they have not addressed the root cause that continues to persist. The additional resource required to fund the manual error reconciliation come at a high cost to the organization.

## Conclusion

Supply chain management professionals can maximize the accuracy and efficiency of their warehouse operations by implementing systems that do not require an operator to manually capture both the load ID and the location. Automatic identification of loads and the location to which they are moved provides a level of accuracy operations could only be obtained by increasing auditing, cycle counting, and intensive inventory reconciliation processes.

There is a value opportunity at each point an operator chooses to scan and manually verify a load movement. Automated identification can be the mechanism to leapfrog the efficiency and accuracy of warehouse operations into a vastly improved environment. A system that can provide the proven reliability of automatic load and location identification would return these values, among others:

- Reduced labor
- Reduced equipment (truck fleet)
- Reduced processing time(cycle time)
- Virtual elimination of pallet miss-ships and the need for pallet cycle counting
- Reduced inventory control and audit labor

While these results are themselves groundbreaking, the most significant result would be confidence in the inventory records, allowing for elimination of safety stock and supplier inventory contingencies. It would enable complete visibility, control, and confidence in the warehouse system data and improvement in customer satisfaction.

## About Rush Tracking Systems

Rush Tracking Systems ([www.rushtrackingsystems.com](http://www.rushtrackingsystems.com)) offers tracking solutions, software, and services that leverage world-class systems integration and business process analysis to maximize the performance and business value of tracking technologies for constrained warehouse operations. As industry veterans Rush Tracking has proven experience working with Fortune 500 companies and expertise in industrial manufacturing, pharmaceutical, consumer packaged goods/food, and petrochemical industries.

Rush Tracking Systems has developed and deployed VisibleEdge™, an innovative lift truck tracking solution that automates data capture of trucks actual location and the loads they carry. Combining data collection devices, load detection sensors, and optical positioning with market-leading VisibleEdge software, VisibleEdge automates tracking by turning the physical movements of lift trucks into business events which can then be consumed by back-end applications.

VisibleEdge enables unprecedented real-time visibility for identifying and tracking the status and location of goods and assets. The granular, real-time data supports improved operational control, improved inventory accuracy, increased inventory turns, improved shipping and receiving accuracy, improved operator productivity, streamlined material movements, reduced working capital, and improved return on net assets.

VisibleEdge is ideally suited for industrial manufacturing environments supporting business processes such as automated shipping and receiving, returnable container tracking, work-in-progress tracking, replenishment operations, finished goods tracking, and other “hands off” asset tracking applications. VisibleEdge automatically captures lift truck load ID and location, verifies the accuracy of pickup events and as well as validates the move, without any required operator scanning or typing.

## About the Author

Walter Tucker, senior advanced tracking business consultant for Rush Tracking Systems, has worked in supply chain and consulting for his most of his career. He began his career with a Hewlett Packard company, working 20 years as a supply chain professional. He moved on to professional supply chain consulting at PricewaterhouseCoopers and later with Arthur Andersen, and honed his RFID skills working in International Paper’s ASURYS RFID division. Tucker has consulted with many prestigious companies, including Sony, Pitney Bowes, Campbell’s Soup, Godiva Chocolate, Pepperidge farms, Kasper, Monsanto, J&J, and Kraft among others.