



ARCHON
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Warehouse Management & Supply Chain Solutions

White Paper

Growing Beyond Paper-Based Warehouse Management Processes



Overview

Many companies continue to operate their warehouses using processes that rely heavily on paper. These processes have many disadvantages and limitations. In this document, we lay out what some of those disadvantages are, explore why companies are hesitant to move to a more modern approach, and describe some of the alternatives.

Disadvantages of Paper-Based Warehouse Management Processes

Processes that rely heavily on paper suffer from a number of disadvantages and limitations including the following:

Error Prone

Paper-based processes rarely allow for warehouse actions to be validated. Since paper-based processes lack validation, a worker in the warehouse can repeatedly make an error without knowing. A worker in the warehouse with a printed pick list can easily end up taking the wrong item from a location near where the correct item is stored or the correct part from the wrong location when the same part is stored in multiple places. Errors like these can also happen during the putaway process. Over time, these mistakes tend to snowball and make accurate and efficient operations increasingly more difficult. Further, paper-based processes usually require lots of manual data entry which provides plenty of additional opportunity for the wrong information to be collected.



Disadvantages of Paper -Based Warehouse Management Processes (continued)

Inefficient

Paper-based systems seldom allow you to gain efficiencies from batching, optimizing picking and put-away paths, or level loading across zones in a warehouse. As a result, companies using paper-based processes usually have more workers and lower productivity than companies using more advanced systems. Mistakes that took place days, weeks, and months in the past further hinder a worker's ability to get his or her job done today. Finally, the inherent inaccuracy of paper-based processes requires costly and time-consuming physical inventories to establish how much of what is where.

Uninformative

Most of the time, data that could be used to better manage warehouse operations is either inaccessible or not collected at all by paper-intensive processes. On a day-to-day basis, there is no opportunity to predict how specific actions will impact the warehouse. Errors that were made earlier in the cycle are often not caught until they impact a warehouse's ability to ship, and even then, there is no ability to go back and perform an analysis of what led to the problem in the first place. As a result, the same mistakes happen over and over again.

Why Companies Continue to Use Paper -Based Processes

Given these significant disadvantages, it seems unlikely that any but the smallest companies would continue to use a paper-based process to manage their warehouses. Nonetheless, perceptions about cost and complexity keep companies using their limited systems instead of choosing a more modern solution. Additionally, there is also the psychology of giving up paper.

Why Companies Continue to Use Paper -Based Processes (continued)

Cost

Many companies prefer the somewhat hidden costs that they are incurring with their paper-based systems to the explicit cost of implementing a new way to manage their warehouse.

Complexity

Some companies are convinced that updating their processes will be very complex between the implementation, training requirements, and ongoing support. They also worry that they will have to change all of their processes in order to match the dictates of a rigid new system.

Psychology

Paper is tangible and it is a form factor that everyone understands. Many people get comfort from the notion that they can refer to a printed list or could pull a piece of paper from a filing cabinet. Paper lists can only tell you what should happen, however, they can't enforce compliance. Similarly, going back and looking at paper-based history only tells you what should have happened without giving you any ability to figure out what actually did happen.

Alternatives to Paper -Based Warehouse Management Processes

The principal alternative to paper-based processes is to deploy a software application or suite that acts as a Warehouse Management System ("WMS"). A WMS will usually use barcode scanners or RFID technology to facilitate data entry, may be integrated with ERP systems, and can control warehouse equipment such as conveyors, carousels and shuttles, either directly or through a Warehouse Control System ("WCS").

Process Validation

A WMS can enforce behavior and procedure compliance in ways that paper-based systems simply cannot. Specific packages and locations have codes that must be scanned during any procedure like picking or putaway. If a worker tries to pick the wrong part or put something away in the wrong location, the WMS will prevent that worker from proceeding to the next step. This compliance enforcement dramatically reduces errors.

Robust, Reliable Data Capture

Scanning a barcode is simple and quick. As a result, more data is captured by a WMS compared to a paper-based system. Further, the need to manually enter data has been dramatically reduced, decreasing the chance that something will be entered incorrectly.

Process and Staffing Optimization

A WMS can batch receipts and orders in order to improve putaway and picking efficiency. These processes are further advanced by optimizing the paths through the warehouse based on the locations that need to be visited. A good WMS will give managers much more flexibility to meet their business objectives. For instance, by using a WMS with order prioritization capabilities, a manager could decide to prioritize all orders for a certain customer or all orders that need to be shipped by a certain carrier. A WMS that offers the ability to simulate actions will enable a manager to see what the impact of releasing work to the warehouse in a certain way will have on workloads.

Useful Reporting

As described earlier, a good WMS will capture lots of data, including the who, what, when, and where of just about every action. Unlike paper-based systems, companies using a WMS are aware of their problems before they try to pick and ship and have the ability to analyze why the problem occurred in the first place. Over time, they are able to manage their warehouses in order to dramatically improve overall productivity.

Alternatives to Paper-Based Warehouse Management Processes (continued)

Return on Investment

While the cost of implementing a WMS can be substantial, the economic benefits associated with better inventory management, better productivity, and the elimination of wasteful validation activities like physical inventories make many projects attractive investments with quick payback periods.

Operational Simplicity

It is true that implementing a WMS can be a complicated process. The payoff following the implementation is that everything becomes simpler. For example, because the WMS is designed to enforce compliance, less training is required and the learning curve for new workers is not nearly as steep. Further, knowledge that used to be acquired by experience is now delivered in real time. For instance, workers no longer have to wander around looking for what they need until they learn where things are in the warehouse because the WMS is guiding them along an optimized route.

Peace of Mind

Companies running a WMS usually produce very little paper beyond barcode labels and packing slips because they have access to robust reporting capabilities that provide visibility into the operations of a warehouse. All of the data available in a paper-based system remains available for review and analysis, along with a lot of additional data. If a company feels that they absolutely have to have a particular piece of paper printed at a particular point in the process, a good WMS will be able to do that. In our experience, clients stop using paper very quickly once they get used to the simplicity and reliability of software-directed processes and once they understand how quickly they can access valuable information through robust reports.

Conclusion

Companies that rely on paper-based processes to manage their warehouses incur lots of hidden costs and face operational challenges that they may not even realize they have. Most of these costs can be reduced and these operational challenges mitigated by adopting a WMS. Customers who have transitioned from paper-based processes to WMS-based processes have reported significant gains in accuracy, productivity and flexibility.

About Archon Interactive

Archon Interactive is a software development company focused on Warehouse Management Systems and Warehouse Control Systems. Our solutions range from simple equipment control applications to our full-blown, enterprise grade warehouse management system, WaveTrak WMS®. Our customers usually see significant productivity improvements in a short period of time while having much greater visibility into their operations. Because we can develop customized solutions, we are able to target particular parts of a warehouse operation in order to provide the greatest improvements for the least amount of cost. We are not constrained by the ERP or MRP in place and have integrated with everything from huge systems from the major global ERP vendors to archaic systems that were developed in-house many years ago. We formally started in the warehouse systems space in 2005, and since then we have built solutions for companies ranging from small distributors to 3PL providers to global 1000 manufacturers. To learn more about how we can help you solve your most pressing operational issues, please visit us at www.archon-interactive.com.