

How Warehouse Management Software Improves Efficiency



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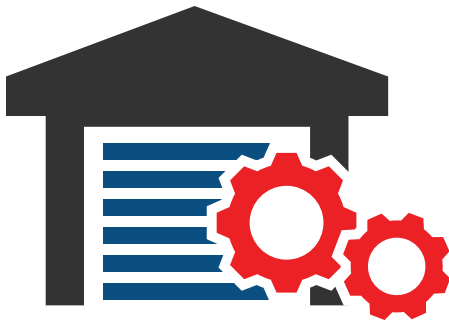
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Warehouse efficiency is a hot topic in many industries. The elements that make for an efficient warehouse include having the right equipment and tools in place, planning your warehouse layout to maximize labor productivity, and promoting a logical workflow that improves both productivity and accuracy. Businesses of any size need to evaluate their warehouse performance on a regular basis to determine how they are doing in each of these categories.

For businesses that are new to Warehouse Management Systems, the first step is looking at your storage space and determining whether or not it is being used to its fullest potential. The next step includes mapping your warehouse and deciding how your employees and products should move through the space. Finally, you will need to decide which software tools and features are most needed to achieve your efficiency goals.

For companies that have already taken the first steps toward high efficiency, the work is not done. Advanced features within your Warehouse Management System can unlock the secrets to an even more productive workforce. Adding equipment that interfaces with your WMS is the next step in the process as well as using a more flexible warehousing layout that reacts to current events rather than staying static. Even if you think you've reached peak efficiency, it is worth taking another look to make sure you didn't miss anything.

SECTION 1:

For The Beginner

Chapter 1: Evaluating Warehouse Layout

Warehouse layout is a crucial part of improving your warehouse efficiency. Many small businesses start out with a crowded space, stacking product anywhere it fits, and suddenly finding themselves having outgrown the first set of shelves they had in place. What you do next can determine the future of your company. Successfully maintaining warehouse efficiency starts with three simple steps: maximizing your storage space, minimizing physical steps, and keeping things clean.



Maximizing Storage Space

Your warehouse storage space is measured in three dimensions. When planning your warehouse layout, you need to account for aisles and shelves on the ground as well as in vertical space. Making good use of your vertical space can save you a lot of trouble later on. You also need to plan ahead for oversized locations to store bulk product and large items, and small parts bins wherever necessary.



Minimizing Steps and Contacts

Every extra step your employees take between items counts against your productivity. Every time your employees leave a fingerprint on a product as they move it is a contact. Your warehouse layout should help

Chapter 1: Evaluating Warehouse Layout

reduce both steps and contacts. Your product and your team members should move as little as possible to get the job done to promote maximum efficiency. Think about how far your product travels between your receiving dock and your product locations. Next think about the average distance your employees travel between locations as they pick or put away. A logical workflow and a system for routing employees efficiently using a WMS will drastically reduce the amount of travel time you are paying for.



Keeping It Clean

A final piece of advice is simply to keep your warehouse clean. Product spilling out onto the floor and hanging off of shelves presents a hazard. Lost time due to accidents is a serious detractor from warehouse efficiency. It is the responsibility of everyone in the warehouse to straighten out messes. Some warehouses place receptacles at the end of the aisle for items that have fallen so your team members can drop them in a bin and continue with their assigned task, and all the fallen items can be put back in the PROPER place at the end of the day instead of just stuffed back into the closest location that gets them out of the way, perhaps never to be found again.

Chapter 2: Stock Locations

Once you have an idea of how your shelving units will be laid out on the floor and how you want your team to move through the space, the next step is to create a location scheme. A location scheme helps optimize your labor force by eliminating time spent searching for products. It also helps radically reduce accuracy errors during put away and picking.



Location Scheme

A location scheme is simply the way that you identify individual locations throughout your warehouse. In most cases this is done through a string of letters or numbers that indicate building number, zone, floor, aisle number, section, shelf, and location. If you only have one building, or one floor, you can leave those bits out. Using a map of your warehouse floor, you can assign location numbers using a consistent, logical work flow, and then label all of those locations out on your floor so your employees will know exactly how to locate any given spot in your scheme. Once your location scheme is in place, you will need to assign products to location based on characteristics such as size, demand, type or process. This usually means having some locations for bulk items and others for small goods. Often, certain locations will be reserved for high volume items that will be going right back out the door.



Chapter 2: Stock Locations



Optimizing Labor

Using assigned stock locations improves warehouse efficiency by optimizing your labor force. Every item in your warehouse will have a place, and the WMS will keep track of that location for you. When the item is ordered, your WMS will tell your employees exactly where it is on the floor and all they have to do is walk to the correctly labeled aisle, section, shelf and location number to pick it. In addition, items that are currently trending can always stay at optimal picking levels, and remain easily accessible so they can be picked quickly. Finally, as your WMS tracks trends, you will be able to group items based on the likelihood that they will be picked together. This increases picking density and further reduces the number of steps your employees are taking between locations. Passing by 10 locations to get to your next pick is far more efficient than walking by 50 locations.



Chapter 3: Software Solutions



The implementation of software solutions is where your warehouse efficiency will really see the most consistent gains. The software reduces human error and waste while ensuring that each action is validated and completed in a timely manner.



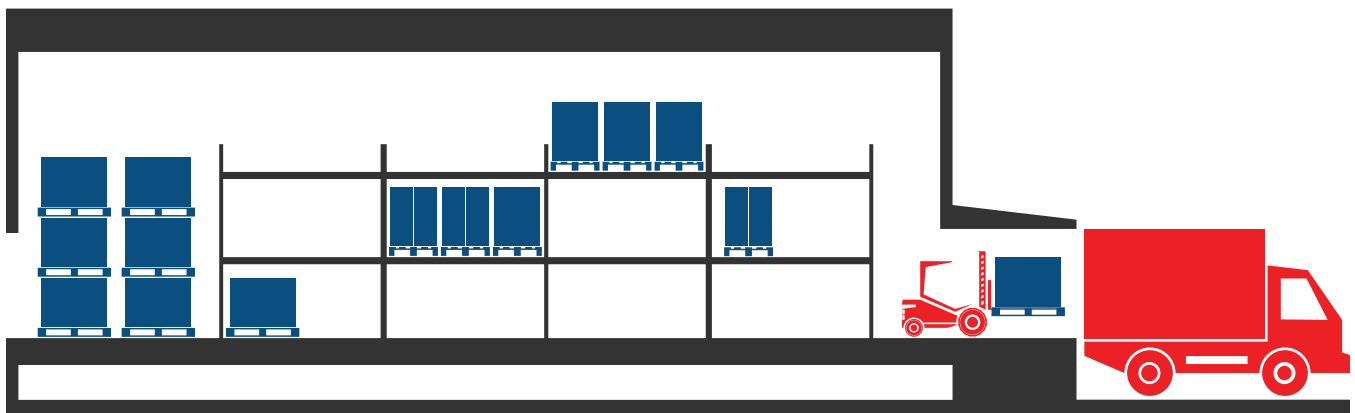
A Guided Tour

First and foremost, your WMS software will manage all routing operations for incoming product and dispatching of orders. It will rank orders according to priority, enable you to batch them based on criteria that are important to you, and create step-by-step directions to guide your pickers across the floor. It can perform simulations that enable you to take into account the time and movements of each individual in the warehouse, and change the batch whenever there is a chance of congestion. If desired, order priorities can change automatically based on established rules. This is a process that would be nearly impossible using manual sorting methods. The result is that more orders get dispatched and picked and your team members never have to guess what their next stop should be.

SECTION 2: For The Advanced User

Chapter 1: Warehouse Layout

If you've had your WMS in place for some time and you've started seeing improvements in warehouse efficiency, it isn't time to stop. Your goal should be to continue making improvements by measuring for success and fine tuning. There is always something to be learned from your WMS and as products change, there is always room for improvement on the floor.



Measure and Assess

Now that you have a warehouse layout that is working, take a look at areas where there are still issues. Does your WMS indicate that there is one area of the warehouse that is still getting hit with heavy traffic that slows everyone down? Do your employees see one area of the warehouse as being particularly difficult to pick from or put away to? Do they have ideas about one extra step that may make their jobs a whole lot easier? Perhaps your first layout was almost perfect, but just needs to be tweaked slightly to gain that extra 10%.

Chapter 1: Warehouse Layout



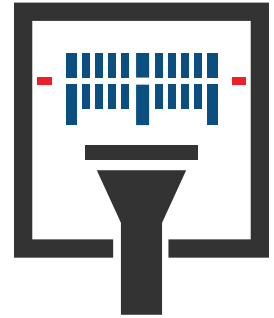
Product Changes

In all likelihood, your products will change over time. When this happens, your warehouse layout needs to remain flexible enough to adapt with the products. You may find that your first layout was too short-sighted and didn't leave room for change over time. It may take a full year to see how your layout works during each season of business. Turn to your WMS and determine whether there are clear indicators of loss of warehouse efficiency during certain weeks or months. How can you address those issues without losing efficiency the rest of the year?



Chapter 2: Stock Locations

The stock location system you set up at the beginning of your WMS journey is subject to the same kind of refinement as your warehouse layout. You may have learned that you need an extra layer of information added to your location scheme to eliminate confusion. You may find that it's time to add automated equipment to speed up access to high volume items. There are plenty of advanced tools that can be worked in.



Random vs Fixed Location Schemes

Many warehouses used fixed locations, meaning that product is always stored in the same location or locations. In more advanced systems, you can use random locations because your WMS will know whatever location you chose to put a product away in. You can also have the WMS choose the location for you. It will pull that information up on its own for routing your pickers later on. This makes it easier to improve put away efficiency and to increase picking density. It also opens up different possibilities when your product changes seasonally.

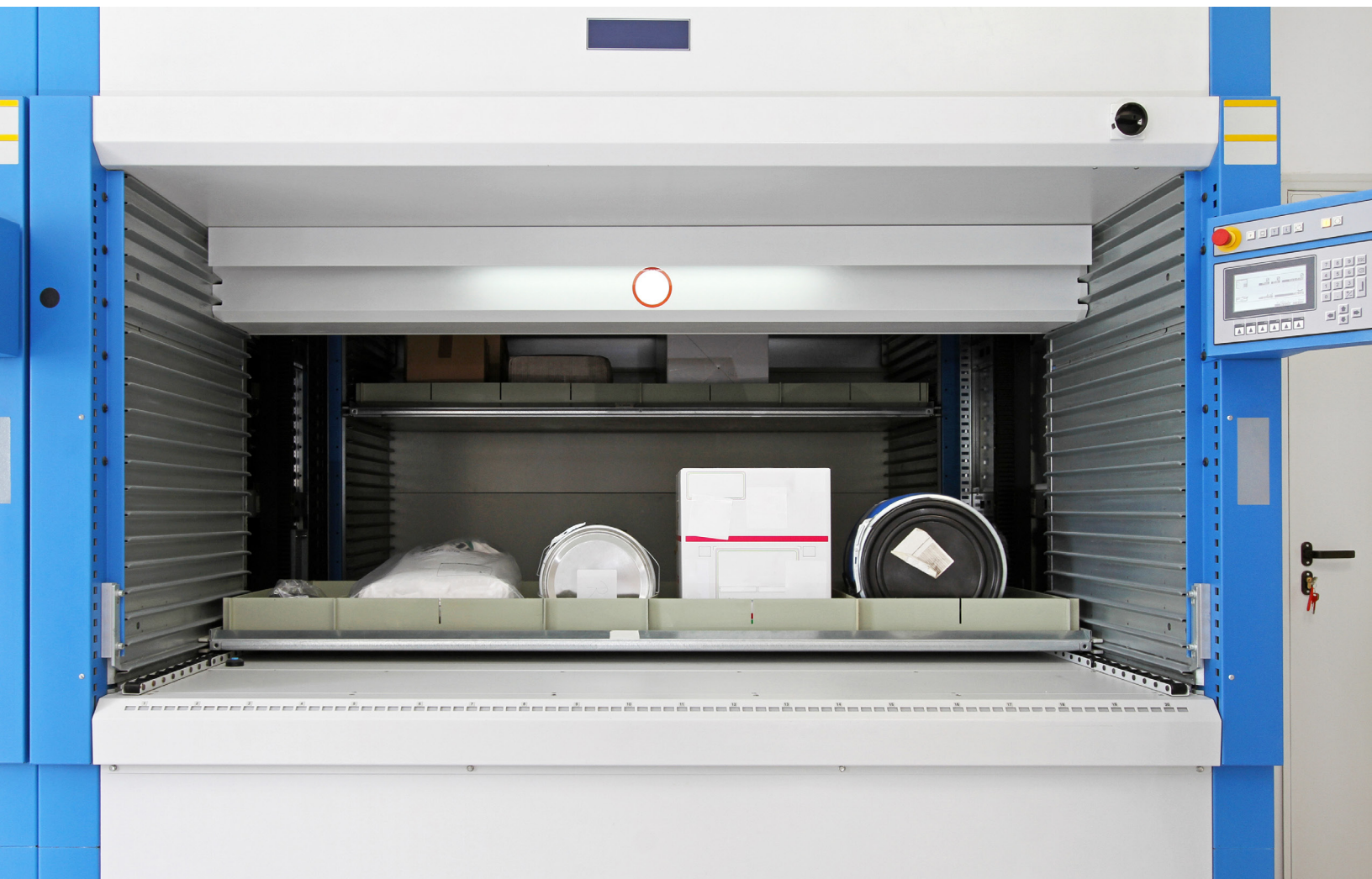


Advanced Equipment

Along with a more flexible and detailed location scheme, you have the opportunity to add physical equipment that builds on your location scheme. This includes Vertical Lift Modules that add more locations per

Chapter 2: Stock Locations

square foot and make it simpler for your employees to pick from vertical space without using a ladder or lift of their own. Carousels work similarly, bringing product to the individual so they can have fixed work stations, eliminating steps. Finally, pick to light systems increase the number of orders that can be picked at any given time and provide additional step-by-step guidance to your workers about how many products to pick, which products to place with which order, and more.



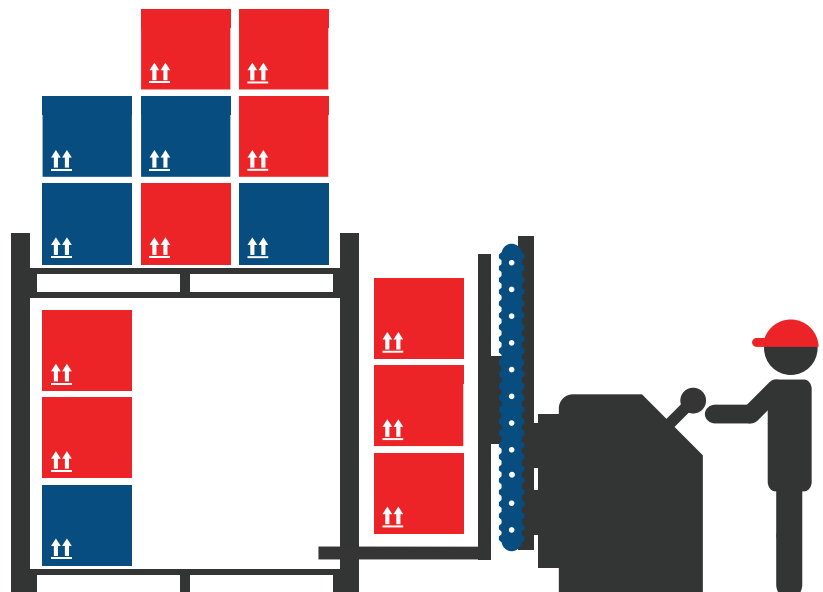
Chapter 3: Optimizing Labor

The next step in assessing your warehouse is to optimize your labor. There are many features built into your WMS that have a direct impact on your warehouse efficiency as it relates to human capital, increasing productivity per worker without making your job any harder.



Order Batching

Batching orders is a great way to get better results from the same size team. Your WMS has the ability to group orders based on the specific characteristics of each order along with up-to-the-minute information about the products stored across your warehouse. Instead of dispatching orders one by one, it can dispatch several at a time to a single individual, and they can suddenly complete three times as much work before getting their next batch. This system takes some additional planning for carts and bins to keep things organized, but it ultimately multiplies the output of your workers.



Chapter 3: Optimizing Labor



Zone Picking

For warehouses that have a mix of products, using multiple zones and having separate picking processes in each zone that run in parallel can really drive productivity. Each worker stays in one zone rather than traveling through the entire warehouse. The picks from each zone are then dropped off at a consolidation station where they are combined into a single order. Of course, picking activity within each zone is still directed by the WMS in order to achieve the highest level of efficiency.



Chapter 4: Software Systems

When you first adopt a new software system, there is a learning curve that you have to overcome. However, even after you've been using the software for a while, you shouldn't get too comfortable relying on the surface level features. Your software system was designed with a greater degree of depth and insight in mind.



Adding Advanced Technology

There are a wide range of advanced tools that can integrate with your Warehouse Management System. RFID tags and scanners are a step up from barcodes that add an extra dimension of data to your warehouse. Other options like Automated Storage/Retrieval Systems, which include Vertical Lift Modules and carousels, can work hand in hand with your software for a less labor intensive approach to warehousing tasks.



Improved Planning

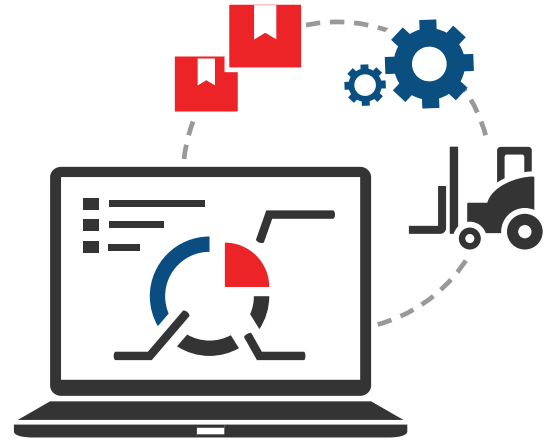
Once you're familiar with how your new WMS works, it's time to go one step further and really maximize warehouse efficiency by coordinating your movements with your shipping schedule. Your WMS allows you to prioritize order dispatching according to shipping windows. This includes differentiating orders shipping with different carriers and their expected pick up times. Once you've mastered this ability, your customers will enjoy more on-time deliveries.

Chapter 4: Software Systems



Learning From Your Software

The long-term goal should be to learn from your software and use it to improve processes and overall quality. Making the most of your software system means analyzing and improving on an ongoing basis. Quarterly reviews of your performance and current trends according to your WMS are a great way to continue pushing for greater efficiency beyond your initial gains.





Hopefully, this guide has helped you better understand how a Warehouse Management System contributes to warehouse efficiency. Whether you are new to WMS software, or you've had it in place for years, there is plenty of room to grow and learn. Many beginners see an immediate surge in productivity after successfully implementing a WMS, but that is not where progress stops. There are many advanced features of your WMS that you can bring into play after the dust has settled. If your team has mastered the warehouse layout themes presented in the first half of the guide, then moving on to more advanced solutions is a natural next step to give you that extra edge over your competitors.



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