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Warehouse Operations: Optimizing the Shipping Process



Shipping is the final warehouse process, and one of the most important ones, for that matter. While customer experience greatly depends on the shipping process, the process itself depends on the previous processes to varied extent.

How efficiently the goods are picked, greatly depends on the put-away process while delivering them in good condition depends on the packing process. As we can see, not only should the shipping process be executed in a proper way, but also efficiently to avoid inefficiencies.



This article takes you through some of the warehouse operations that have a direct impact on the shipping process, as well as some of the best practices to optimize it.

Warehouse Shipping Objective

It is essential to keep in mind that shipping is considered successful only if the right order is sorted and loaded, destined to the right customer through the right transit mode, and delivered on time.

Since shipping is the last warehouse process, it is important to keep in mind that all processes before it have a direct impact on its efficiency and effectiveness. Let's run through the processes which precede and those which comprise it.

Ordering

If you need to process an order from a customer, communication is paramount. To avoid miscommunication and reduce costs, it is highly recommended to offer customers an online portal through which they can see their inventory, select the items they want to ship, and submit the order for processing.

Once the order is placed by the customer, the system must produce a picking list and/or loading guide with the items that the customer has selected. It is also recommended that the system provides special fields for customers to enter detailed instruction if needed, for e.g., re-packaging instructions.

While the portal will help address many of the problems related to the ordering process, other direct forms of communication such as phone, email, and messenger should also be available. Do require your customers to place orders through the online portal as much as possible. This will reduce errors, increase efficiency and accountability.



Put-away & Picking Processes – Right Technology and Methodology

The put-away process may seem too far off from that of shipping, however, the location of goods has a great impact on it. If goods have been appropriately placed considering order frequency, lead times can be shortened effectively, thus rendering shipping more convenient and efficient.

Placing frequently ordered goods handy, occasionally ordered goods a little farther, and rarely ordered items farther still helps reduce picking time.

Picking efficiency can be achieved by deploying the right picking methodology coupled with the right technology. [The use of wearable and mobile technology](#) can expedite the process by allowing pickers to freely move across the warehouse while Radio Frequency Identifiers (RFID) can tell them with exactitude where the goods are stored.

What is wearable & mobile technology?

Warehouse mobile solutions include vehicle-mounted computers, smartphones, tablets, handheld scanners and mobile printers that allow warehouse personnel to freely move around the warehouse and remain fully connected regardless of location.

These technologies are becoming part of standard warehousing operations and are enabling uninterrupted flow of information across the business and supply chain, almost in real-time.



Packing and Labeling Processes – Automation

Packing comes just before shipping, and thus affects the latter immensely. Here is how you can increase the warehouse process flow efficiency in this case:

In case of individual items:

When it comes to pulling one order at a time, packing and labeling them immediately is recommended – here mobile printers come very handy. As an added choice, you may also want to insert documents and invoices as you pack each order.

If there is a possibility of damage while in transit, add protective packing like foam pallets, polystyrene, air-filled bags, bubble wrap, shredded paper, etc. You might also want to have personnel performing quality control if there is a history of pickers damaging goods.

Since this is an activity that increases shipping time...

The trade-off is between doing it manually and automatizing it.

If the cost of the time lost exceeds the cost of installing and running packaging machines like carton erectors and packing robots, automation is certainly the answer.



In case of batch pick:

Batch-picking does not allow packing and labeling like in the case of individual item-picking. This methodology will require you to separate each order and check for accuracy during the packing phase.

Here, a picking list and/or loading guide enumerating the products associated with an order and a barcode to compare what is being picked vs. what was ordered, can significantly reduce the problem of shipping the wrong items and/or wrong quantities.

Once the orders have been checked for accuracy, they are packed into cartons (depending on fragility, protective packing is added) and labeled. And once pick and pack operations have been accomplished without error, comes the turn for the shipping process itself.

Shipping Process

Here you take the final measures to assign the transit mode and prepare shipment orders accordingly. It includes:

Weighing and Dimensioning:



For some warehouses and distribution centers, the next thing is to measure weight and dimensions. In the case of parcels whether they are single items or consolidated cartons, some warehouses or distribution centers are required to record the weight and dimension on the label.

To do this efficiently while reducing the chances of error, it is recommended to implement an inline scale & dimensioner solution that is fully integrated with the Warehouse Management System (WMS). As the cargo moves down the conveyor, weight and dimensions are automatically captured and recorded in the WMS without having to stop the flow cargo.



Documentation:

In the absence of mandatory documentation (which will vary in each case), shipments can be stalled. Depending on the nature of shipment, here are a few documents that you may need:



- Cargo Document
- Shipment Labels
- Bill of Landing
- Certificate of Origin
- Advanced Shipping Notice
- Export Declaration from Shipper
- Export License
- Inspection Certificate
- Insurance Certificate
- Invoice
- Export Packing List

If any of this documentation is required, having a WMS capable of producing it or having it on-hand/ready-to-use is critical.

Loading:

The basis for an efficient loading process is a well-planned load strategy. Either through standardization of cargo or a WMS that can produce a loading guide for shipping, personnel must have clear loading instructions on how to properly load the cargo.

It is recommended to rely on the WMS to produce such guides because they often take into consideration, package constraints and characteristics such as weight, dimensions, hazmat, fragility, and more.

To make this accurate, go for software that help you with pallet configuration, container planning and trailer loading to ensure optimum utilization of space and resources.

Another best practice that does not requires system involvement but can speed up the process is to have ready-to-ship-cargo in predetermined areas (loading queues or staging area) as close as possible to shipping docks.

Also, warehouse managers need to make sure that they have enough manpower and the required equipment to execute loading tasks.



It is recommended to separate receiving and shipping docks, but if that is not possible, warehouse managers must schedule the two distinct processes in such a fashion as to prevent congestion and confusion at the docks.

Consider some of the following best practices to optimize the shipping process:

- Ensure that picking and documentation are done well in advance before the time of shipping.
- Schedule receiving and shipping in different shifts (morning-evening).
- In case your throughput is very high and you ship several times a day, it is preferable to have a manifest system of your own that supports all modes of transportation that you use for shipping.
- Logic-based warehouse tech for shipping can lower the costs substantially by determining the most optimal carrier and transport method for shipping any order. Complex logic can also enable you to make intelligent choices in case the carrier and/or method are inexpensive but not efficient.
- Keep the shipping docks always clean and decluttered and avoid personnel unrelated to this process present in this area while shipping is taking place.

As we have seen, optimizing the shipping process is highly correlated with the way previous warehouse processes have taken place. For shipping to be effective and efficient, these predecessors must be optimized. Once the previous processes have been streamlined, only then can we focus on specific best practices and technologies to optimize the shipping process itself.

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