

TIME TO REVAMP YOUR WAREHOUSE MANAGEMENT

HCL'S WAREHOUSE SLOTTING SOLUTION FOR STREAMLINED OPERATIONS, OPTIMIZED COSTS, EFFICIENT MANAGEMENT



INDUSTRY OVERVIEW

Warehouse Management as a business is getting more complicated. With the ever growing competition and increased pressure on margins, it's becoming necessary to improve the efficiency of facilities, resources and operations in and around warehouses. With the help of IoT, slotting becomes more robust and effective.

Major players like JDA, Manhattan, SAP, etc., continue to invest in their Warehouse Management System (WMS) products and its ancillaries by adding more features and functionalities to cope up with the growing trend in the industry. Also, more third-party tools are getting released to the industry which can integrate with leading WMS and ERP systems and

provide some peculiar functionalities to the warehouse business that may not be easily provided by the standard (or even through customization) WMS or ERP products in the market.

Warehouse Slotting is one such functionality that most of the warehouses need. This supplements any WMS, the ability to define the placement of products within a warehouse's facility by calculating the optimum bin(s) for the product(s) in the warehouse and maximize the use of the warehouse's cube space thereby enhancing the storage space, labor and picking efficiency, balanced workload resulting in reduction in warehouse handling costs.



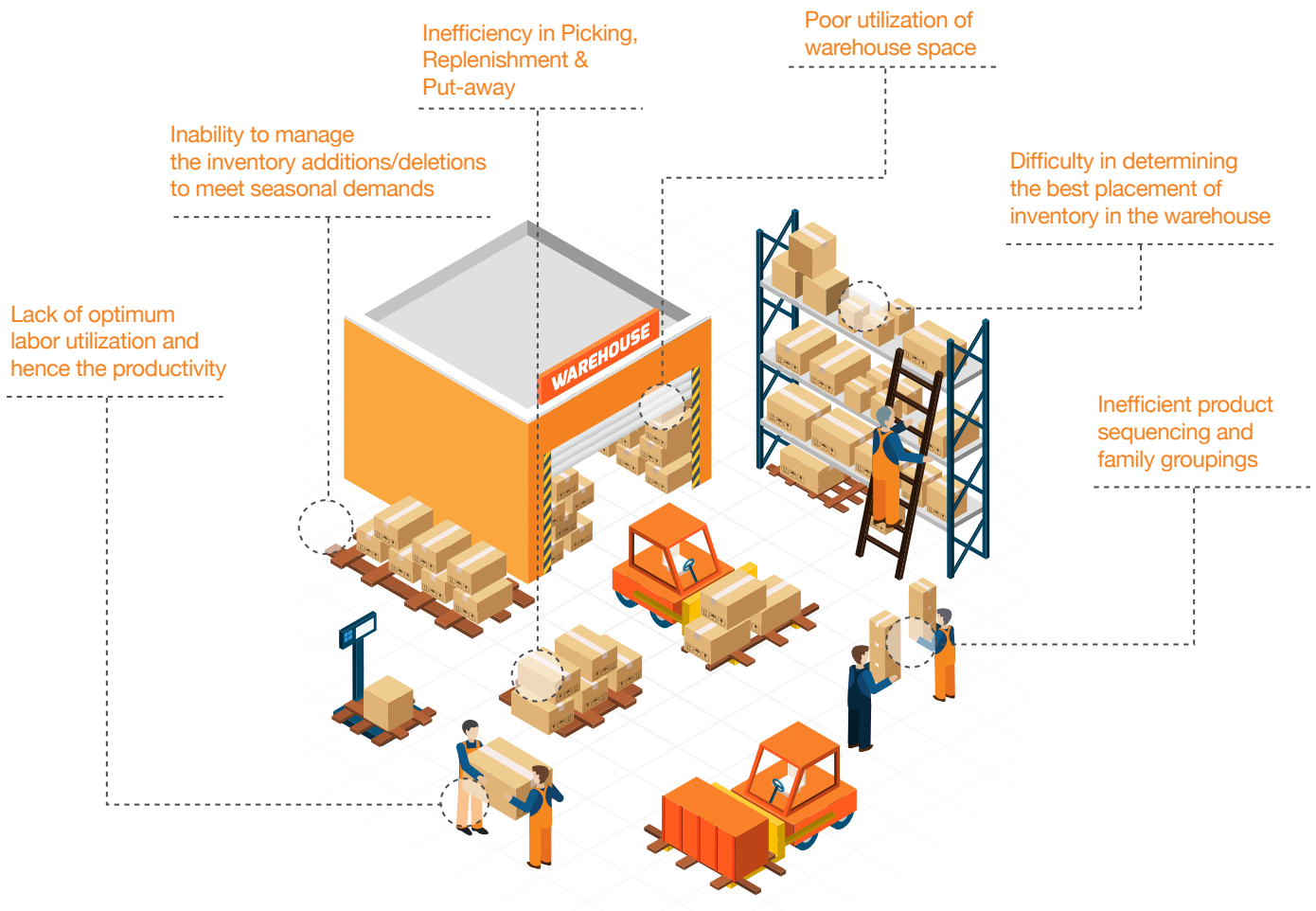
BUSINESS NEED

- In most warehouses, where there are little or no efficient operational processes, the operators store the products wherever they find the first available home and in such environment there is little reason to predict as which product should go where within the warehouse.
- There are still many warehouses using simple spreadsheet based processes for slotting and it's OK to some extent as long as the warehouse is small and running on lower volume. But as the size of the warehouse, volume and the product families' increase, an advanced slotting tool is getting

compulsory if at all we need to gain the maximum out of the existing provisions, especially in the ever growing margin pressures and the competitive nature in retaining the customers in a warehouse.

With the help of Internet of Things (IoT) based sensors and RFIDs slotting can be done more effectively in WMS. These processes can be automated so that manual handling can be avoided.

Here are some of the typical business challenges that necessitates the need for including slotting into the warehouse scheme of things.



WHY WAREHOUSE SLOTTING?

While some of the warehouses are still using manual slotting processes, with the number of products and volume grow, it's getting difficult to achieve the efficiency of operations and hence the cost reduction.

It is common that many of the leading WMS don't come with in-built slotting mechanism to influence slotting in a warehouse; hence it is becoming important to have an effective slotting tool, in order to stand out in the competition and have a cost-effective operation in the warehouses.

A modern automated process with IoT slotting mechanism identifies the most efficient storage type, picks location and assigns to each item in the warehouse. The slotting rules or strategies depend on a large set of factors starting from product family, weight, size, dimensions, nature, etc., of the product

and an efficient slotting tool takes as many of these inputs to recommend an appropriate slotting for the warehouse.

The typical slotting project will start by ranking all items in the warehouse based on the frequency each is picked. This is very easy to do and simply involves creating a report or query based on either your sales order detail file, a transaction history file, or a movement history file. It will generally run this against a full year's transactions and count all sales transactions for each item, then sort the report or query by the total sales transactions in descending order. So the first item on the report is the fastest moving item, the second is the second fastest moving, and so on.

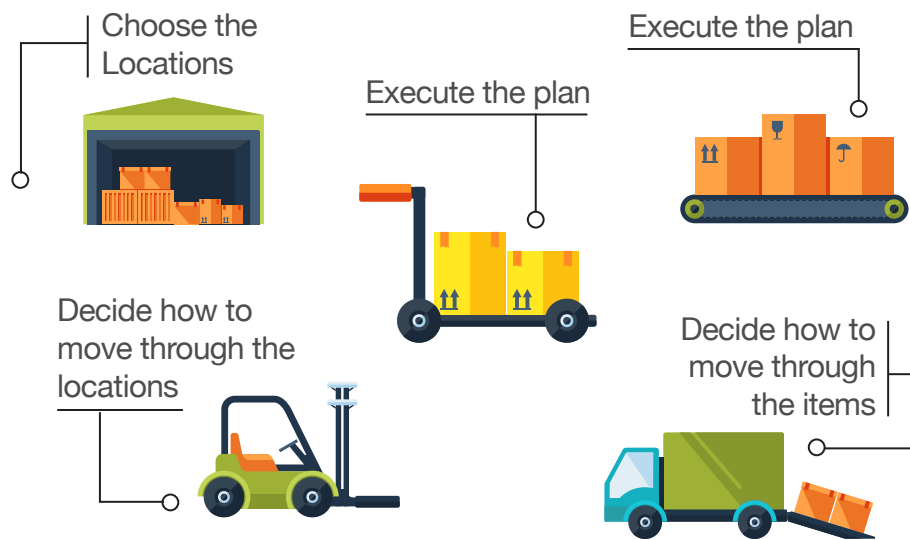


HCL VALUE PROPOSITION

HCL's slotting tool has its set of algorithms and procedures to analyze the data from WMS and then provide instructions to WMS for the appropriate slotting of products in the warehouse.

could begin right from populating slotting tables and end up in creating moves and transmitting the same to WMS. Then those transmitted moves are performed in WMS for efficient storage practices and minimize the fulfillment costs.

Basically it starts from importing data from WMS to slotting suite. After importing data, slotting process



Solution Highlights

- ▶ A GUI based application which can be installed with minimum effort and can be integrated with any leading WMS
- ▶ Seamless integration with leading WM Systems
- ▶ Ability to configure the tool to run manually or on a schedule
- ▶ Flexibility for selection of a specific strategy or the tool's recommended rule choice for optimum labor utilization and hence the productivity
- ▶ Best placement of inventory in the warehouse, for efficient Picking, Replenishment & Put-away
- ▶ Ability to generate automated work for re-slotting
- ▶ Rich comparison charts
- ▶ Ability to manage the inventory additions/ deletions to meet seasonal demands, hence better utilization of warehouse space

WAREHOUSE SLOTTING – SOLUTION BENEFITS

General benefits to the warehouse from good slotting include the following:

- **Picking Productivity:** Travel time can often account for up to 60% of a picker's daily activity. A good product slotting strategy can reduce travel time thereby reducing picking labor.
- **Efficient Replenishment:** By sizing the pick face locations based upon a standard unit of measure (case, pallet) for the product in question you can significantly reduce the labor required to replenish the location.
- **Work Balancing:** By balancing activity across multiple pick zones one reduces congestion in the zones, improves material flow and reduces the total response time for a given order or batch of orders.
- **Load Building:** To minimize product damage, heavy products are located at the beginning of the pick path ahead of crushable product. Product may also be located based on case size to facilitate pallet building.
- **Accuracy:** Similar products are separated to minimize the opportunity for picking errors.
- **Ergonomics:** High velocity products are placed in a "golden zone" to reduce bending and reaching activity. Heavy or oversized items are placed on lower levels in the pick zone or placed in a separate zone where material handling equipment can be utilized.
- **Pre-consolidation:** By storing and picking product by family group you may be able reduce downstream sorting and consolidation activity. This is particularly

important in a retail environment to facilitate efficient restocking at the stores.

- **Space Utilization:** With the right product in the right sized locations substantial cube can be freed up allowing for additional product placement or avoiding facility expansion or overflow.

From HCL, we propose a tool for Warehouse Slotting. The benefits of using that tool are as follows:

- **Increase in**
 - Picking productivity – up to 10%
 - Pallet picking operations – up to 10%
 - Case picking operation – up to 15%
 - Broken case picking operation – up to 25%
 - Labor productivity increase for order picking function – 5 to 20%
 - Warehouse storage capacity – up to 25%
- **Decrease in**
 - Replenishment labor hours – up to 20%
 - CAPEX/ OPEX – up to 15%
 - Labor travel time – up to 30%
 - Inventory damage – up to 10%

WHY HCL?

- Unique business process-led approach powered by strong domain knowledge in Transportation with 10+ years of experience catering to 20+ logistics customers globally
- An experienced partner who can help you gain maximum efficiency across the operations
- Maximize ROI through bolt-on solutions that are a smart investment with a fast pay-off
- Complete framework for assessment, including KPIs, tools and accelerators that can bring about business benefits in the shortest time frame

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