



VisAI Labs

Whitepaper



SIZE MATTERS IN THE WORLD OF AUTOMATED WAREHOUSING



visailabs



SUMMARY



Size is a focal piece of the warehouse. The parcels and boxes come in varied shapes and forms. At present, the eCommerce vertical growth has proved that parcels' size and conditions are more crucial in automated warehousing. In this article, you get a fair thought of how the term "size" is critical in the warehouse sector.

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INTRODUCTION:



Ecommerce is the new popular expression spreading quicker across the globe. The novel pandemic has proved that online purchase is almost straightforward; all we require is that we need to be more transparent in handling the applications. A decade ago, the warehouses were viewed as a focal zone to store numerous products. Since the development of eCommerce has tremendously expanded, and most of the crowd choose web-based purchases.

INITIATING AUTOMATION IN THE WAREHOUSES:

The global warehouse market is expected to two fold by 2025, including immense competitors and demands for the goods and the automation technologies invested in the warehouses.

However, with the new technologies like automation and robotics come new hurdles and unexpected issues to solve.



WHAT IS WAREHOUSE AUTOMATION?

Automating various warehouse operations includes operating hardware, software, and individuals (labors) to improve its effectiveness and precision. Most warehouse proprietors take steps to boost operational cycles, such as improving warehouse production, competence, and reducing costs; these sorts of methods cannot be solely accomplished with human efforts. By deploying automation technologies and robots, we can productively complete most warehouse activities in a more limited period.

Warehouse automation can be classified in to process automation and physical automation.

Process automation is otherwise called business automation or digital transformation, a technology-empowered to perform several iterated tasks using the software. It runs on barcoding and wireless barcode scanners to trace the parcels' data and send it to the inventory.

Physical automation alludes to the use of robots and robot systems in the warehouse. The physical automation operations include anomaly detection using drone technology, driverless autonomous vehicles, and robots.





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WHY SHOULD YOU AUTOMATE YOUR WAREHOUSE?

At present, the metamorphosis of e-commerce is rising several times, and automating the warehouse becomes a crucial part of the business supply chain. The automation process is bought viably to the warehouses to bring down the reiterated manual cycles.

IMPACTS OF WAREHOUSE AUTOMATION

SALES SWAY :

The impact of sales is directly proportional to expanded customer satisfaction; it does not make a difference how the sales and marketing department brings new requests; the poor customer experience will right away reduce

the sales relationship with the organization; subsequently, they will never come back. With the impact of the increased sales, the accuracy of demand forecasting rises reliably.

PRODUCTION SWAY :

The process to bolster any manufacturing applications that enhance profitability and customer service.

BUSINESS SWAY :

Effectively handles various business-related operations such as real-time transport visibility, quick payment

cycle, and invoicing and also managing shipping charges during the tight shipment schedule.

CLIENT SUPPORT SWAY :

Enhancing better order fulfillment, providing customers products' real-time status, and improving customer satisfaction and retention.

DID YOU KNOW?

Logistics Software Solution providers incorporate Automated dimensioning and edge AI into their solutions to improve ware house productivity

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BENEFITS OF WAREHOUSE AUTOMATION

Understanding the benefits of the warehouse is a multi-overlay part. Without better insight, you cannot deploy a solution and envision better outcomes in the fast-paced business environment. Below are the benefits of warehouse automation.



INCREASED SPEED :

With the increased Speed, we can advance and improve the production and product retrieval process. We can easily manage the inventory management process and order fulfillment process by accelerating the operational Speed

BOOSTINGSPACE :

The warehouse automation systems help maximize the warehouse space, such as sorting and arranging the pallets and existing parcels to enhance the space arrangements.

BETTER INVENTORY MANAGEMENT :

warehouse automation can help reduce human blunders such as feeding incorrect or inaccurate data, recording irrelevant parcel counts, and many more. The reduction of inaccurate data results in better order fulfillment, and there is no need for rechecking processes.

ENHANCED SAFETY :

According to the statistical report, about 25 % of injury claims are due to falls and slips in the warehouse. So prioritizing the safety protocols is the most crucial part of the warehouse, and with warehouse automation, there are no such worries in the warehouses.



FUNDAMENTAL GUIDELINES TO KEEP THE WAREHOUSE A SAFE PLACE

Can deploy some safety equipment such as appropriate eyewear, hard hats, placing some fire extinguishers, and more based on the sort of warehouse we oversee.

Illustrate the hazardous zones either using tape or use contrast paints to represent the hazard sign.

Conducting safety measures and training programs for the employees, explaining the usage and the safety equipment can aid during the challenges.



HOW CAN WE OPTIMIZE THE WAREHOUSE FOR BETTER OPERATION?

An optimizing warehouse is a fundamental key to victory in the eCommerce division. Low-efficiency slows down the production phase that affects the estimated delivery framework, resulting in a poor customer experience.

DID YOU KNOW?

By using Camera enabled Automated dimensioning solutions you can use bolt on AI applications for broken box detection or package optimization without additional investment?

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BEST PRACTICES AND TECHNOLOGIES WE CAN IMPLEMENT TO ENHANCE WAREHOUSE OPTIMIZATION

SETTING A WAREHOUSE TIDE AND COORDINATED :

A spotless workplace can make all differences. In another case, the disorganized workspace can straightforwardly impact the production rate. Certain messy services incorporate investing enough time to look through the items, moving packages all around the warehouse, maintaining an improper in-house package insight, overstocking the inappropriate products, and many more. Without an organized warehouse, you cannot streamline any of your warehouse production operations efficiently.

DEPLOY SUITABLE EQUIPMENT TO AUTOMATE WAREHOUSE PROCESSES :

choosing the appropriate technology depending on your industry is the essential method to set up a vertical. This state initially takes some time; we need to have better insights into determining request reports and information about the hardware we pick. With the right warehouse optimization, we can accelerate throughput, eradicate human errors, and provide precise stock reports.

OPTIMIZING THE WAREHOUSE STORAGE :

: As per the statistics, there is a monstrous lift in the online e-commerce vertical. Most sectors are now intending to enlarge their warehouses; this is due to the surging necessities of products and customers. By stocking more enhanced products in-house, there occurs a shortage of ground space. These area concerns can viably lessen the travel period from aisle to aisle, advance warehouse safety, and ease equipment traffic.

BRINGING DOWN THE NUMBER OF TOUCHES :

lessening the hand-operated operations is the more reliable path for fruitful warehouse enhancement, meaning – warehouse automation can facilitate iterative manual functions such as sorting, packing, and shipping processes.

SETTING UP A FIXED LOCATION AND ZONES FOR THE OPERATIONS :

Setting up a designated spot for the operations is crucial in constructing a proficient warehouse. Setting up the fixed zone\location in the warehouse is framing a particular territory for each operational procedures such as putaway, picking, and replenishment for the products.

DEVELOPING AN INVENTORY REVIEW ACTIVITY:

By enabling an inventory review activity, we can get a clear insight into a profit gained from the developing phase's investment. There include two types of inventory systems, such as periodic and perpetual systems. A periodic inventory system is dependent on an occasional basis depending on the organization's requirement. A perpetual inventory system is dependent on an everyday basis, but it is quite expensive than the periodic since it requires more software applications.



Automated dimensioning solutions built on Stereo camera tech are faster and more accurate than other types of dimensioning systems

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HOW DOES SIZE WORKS IN THE WORLD OF AUTOMATED DIMENSIONING?

The size is the crucial concept in automated dimensioning. Most of the dimensioners are deployed in the market to calibrate the dimensions of parcels. In the traditional dimensioning method, the employee uses tape and ruler to measure the packages, which may sometimes provide incorrect dimensional data, which later produces unnecessary shipping charges.

The automated dimensioning solution is deployed in the market to ease out the faulty dimensional data concerns. In another case, most warehouse sectors choose the automated dimensioning solution to enable the production momentum, reduce the shipping charges, and enable a better storage space in the warehouse.

This dimensioning solution comes in various sizes like pallet dimensioners and parcel dimensioners. The pallet dimensioner measures pallets and crates' dimensions, whereas the parcels dimensioner measures the dimensional data of parcels of varied shapes such as a cube, cuboids, and polybags.

Here are the reasons why automated dimensioners are deployed in the warehouses to perform parcel operations effectively:

SPEED AND ACCURACY :

As the eCommerce sector is growing monstrous, it becomes a paramount task to increase the warehouses' productivity to deliver the products to the customers' doorstep on-time.

The automated dimensioners can calculate the dimensions such as length, width, height, and breadth of the product in less than a second and with accurate dimensional data.

CAN CAPTURE A PHOTOGRAPH OF THE PRODUCT :

The main aim to capture the product's picture is to check for any anomalies a step before the shipment phase. The process of capturing an image can help acquire the data for future insight and generate more analysis

information like developing a forecast demand report based on the number of purchase happened with the same product during varied seasonal periods.

CAN INTEGRATE WITH OTHER DEVICES :

At present, most of the automated dimensioners are developed to multitask; this includes estimating the dimensions, weight,

which can be connected with a labeling device, barcode scanner, and printers to print the product invoice.



THE FUTURE OF WAREHOUSE TECHNOLOGY



The warehouse is the heart of the eCommerce industry. If the warehouses are agile and efficient, there would be positive customer satisfaction, resulting in a massive business profit. In contrast, if the warehouse coherence flops, there would be a lack of market gain, unnecessary shipping charges for the products, low customer satisfaction, and imbalanced inventory management. It is always essential to renew the vertical ecosystem as per the innovation to make our lives more manageable.

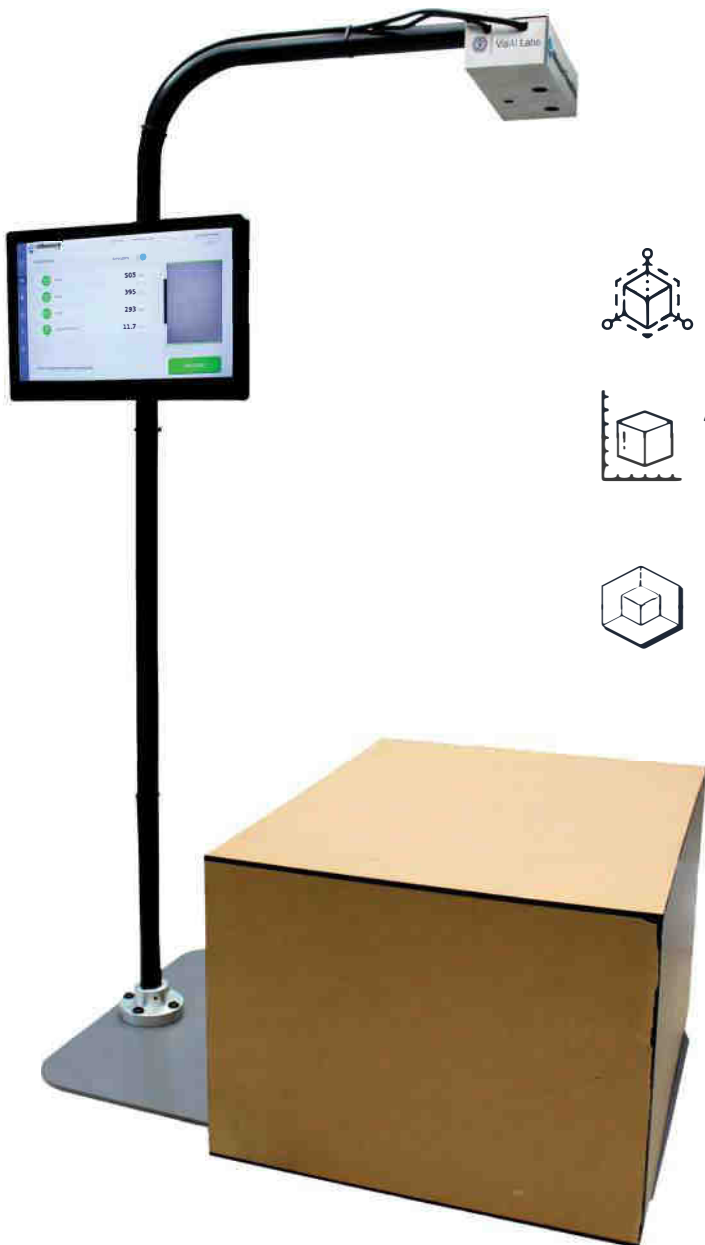
Today, companies worldwide face numerous issues and pressure differently; playing the right game will be the smartest way to hold customers and increase sales in the eCommerce sector. Enhancing different automation technologies such as automated dimensioning solutions, drones, inventory management systems, supply chain, and logistic providers would be a gamechanger.

CONCLUSION

The concept of eCommerce and warehouse is getting in the products in-house before showcasing them online. On that note, the size plays a massive role in the warehouse vertical, right from the market size to estimating a delivery timeframe depends on the parcel size to the customers' doorstep. As eCommerce remains to grow, there is no doubt the warehouse and logistics would proceed to grow parallel simultaneously. In this case, maintaining a better relationship with the employees and patrons would elevate the size of loyalty and satisfaction manifold.



CHECK OUT THE COMPUTER VISION ENABLED AUTOMATED DIMENSIONING SYSTEM FOR WAREHOUSES AND ORDER FULFILLMENT CENTERS



Minimum Dimensioning : 10X10X10 cm
Maximum Dimensioning : 50X40X30 cm



Accuracy :
+/- 5 mm for cubes and cuboids
+/- 10 mm for non-cuboidal shapes



Dimension:
Cubes | Cuboids | Polybags
Tubes | irregular shapes

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