



VisAI Labs

WHY WAREHOUSE LABOR STATISTICS INDICATE THAT AUTOMATED DIMENSIONING IS A LIFESAVER



Visailabs



SUMMARY:

The evolution of eCommerce is skyrocketing in recent times. Individuals get more attracted to the services, resulting in a vast order request wave to the warehouse industry. Due to an overflow of online orders, the warehouse and logistics networks should uplift their working efficiency. By introducing warehouse automation, we can ease iterative hand-operated works and rapidly get the job done. Check out this article to know why warehouse labor stats indicate automated dimensioning a lifesaver.





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Adopting the automation trend in the warehouse and logistics industry

The neoteric stats project that over 15% of the warehouses use automation technology to mitigate various iterative human-held operations shows that the automation trend has slowly attracted the warehouse industries. The warehouse proprietors split automation into three levels (system, mechanized, and Sophisticated) based on the operational paradigm.

The system automation incorporates a warehouse management system (WMS) with a radiofrequency (RF) device, Pick-to-light, or Voice-picking.

The mechanized automation includes Conveyors, automated storage (AS), and retrieval systems (RS).

Sophisticated automation contains automated guided vehicles, sorter, robotic picking, and palletizers.



WHY IS WAREHOUSE AUTOMATION SKYROCKETING NEWLY?

The current pandemic has raised a hype on web-based purchases, which ended with the tremendous surge of internet orders; This is due to an enhanced user experience. Other than that, there is a vast journey hidden behind the order fulfillment process.

IMPORTANT REASONS WHY WAREHOUSE AUTOMATION WAS SKYROCKETING A SHORT TIME AGO?

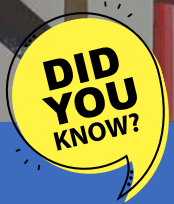


Increased labor and space outlay:

When the vertical expands, the need for labor and room space becomes an essential phase. The growth of eCommerce directly reflects in opting for new associates in the warehouse to perform various operations such as tracking the in-house products, extracting the list of delivered products, navigating the product's location using barcode scanners, and many more. All these sorts of operations are pretty iterative and intricate.

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In forthcoming years, the warehouses' growth will be tremendous; as long as eCommerce continues to surge, there would be a massive demand for the sparing rooms to stock up n number of products. This scenario sometimes results in spending more amount in rents, which creates frustration to the warehouse proprietors.



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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Overflow of online order requests:

The flood of onstream order requests pushes warehouse and logistics providers into a fast-delivery race. Due to an increased order frequency, most warehouses and distributional centers couldn't handle most of the operations using a traditional technique. In other ways, Handling shipments and deliveries are relatively intricate, as the customers always expect same-day or one-day conveyance. Enabling automation technology would reduce most warehouse and logistics centers' complex operations and raise the vertical potency.



Higher consumer expectations:

customer expectation is what keeps overflowing orders in the eCommerce sector. Streamlining the smooth order transition is the most prominent role warehouse should seriously take into account. Some of the typical consumer expectations include providing reliable information of the product, fast deliveries, price, quality, and convenience. The warehouses and distribution centers should establish automation technology to fulfill customer needs.



THE RISING ECOMMERCE CONTINUES TO PUSH HIGHER CUSTOMER EXPECTATION – HOW THIS MAKES SENSE TO YOUR WAREHOUSE?

2020 has been a year that exacerbated everyone's lives, and it's been a most prolific year for the eCommerce sectors due to the superabundance of online orders. Because of the rapid-fire evolution of digital growth, most warehouse proprietors face overwhelming customer expectations. According to the futurists' prediction, warehouse automation would be a new normal among the eCommerce sectors. The technology deployed in the warehouse would set up to be integrated or updated as the business matures.

BELOW ARE THE TWO ROBUST WAYS THAT AIDS TO MANAGE HIGHER CUSTOMER EXPECTATIONS IN YOUR WAREHOUSE:

Fix your warehouse automation level: As the warehouse face torrent of order requests every day, the level of work cycle explodes drastically, and warehouse employees cannot handle this situation, as they need to maintain the in-house stock reports, should keep track of fast-moving products based on the order request and forecast reports, should the customer satisfaction level and many more operation that sounds like a big deal.

Running the warehouse operation using traditional methodology will ruin most of the process, and later it may result in yielding incorrect product information, pointless transport fee, etc.,

By choosing the correct automation based on the process's complexity, we can quickly cut down the time lags and human blunders. But before that, we need to understand the level of automation that has to be implemented in the vertical.

Building a scalable solution to your vertical: after estimating the warehouses' automation level, the next step is to get the right fit automation for your working ecosystem. As the industry matures, we need to define and build the required technology in the workspace as per the employees' prerequisites.





BENEFITS OF ADOPTING AUTOMATION TECHNOLOGY TO THE WAREHOUSES



Consumes time and money:

The term "time" and "money" are the two fundamentals of the warehouse vertical. With the automation technology, we can disengage the warehouse's redundancy operations, which bolsters increased productivity.



Minimizes human errors:

Inexact information will always be a massive headache for both customers and business proprietors. With imprecise package information, you tend to pay out pointless delivery charges; with the righteous automation technology, you can effortlessly vanish the conveyance fee and can rocket the market value.



Maximizes the room space:

space is the most paramount resource in the warehouse. Organizing the warehouse space can do wonders, and the warehouse automation supports ensuring the available room space for upcoming endeavors.



Streamlines order cycles:

leading the order cycle is one challenging practice that you can't negotiate, and you attempt to do, then there's the massive



Could manage inventory data:

Overseeing the inventory could be more challenging. The precision of inventory is calculated by dividing the number of counted items that perfectly match every aspect of the record by the total number of objects counted.

Below are some of the tips to guide inventory system in the warehouse:

- Try money-saving options such as wave picking and cross-docking (the method of moving products directly from in-house to the dispatch bays).
- Synchronize the inventory levels and accuracy.
- Modify the floor plan.
- Track sales and orders for each product in the warehouse.
- Enable movable and fixed tracking options.
- Automate most of the redundant warehouse operations.



WHY IS WAREHOUSE AUTOMATION SO IMPORTANT?

Warehouse automation has become an increasingly impressive alternative that can pave the way for various functions such as overseeing the space, diminishing the building cost, lessening the operational expenses, and improving the warehouse potency. There lie two fundamental motivations to automate the warehouse such as:



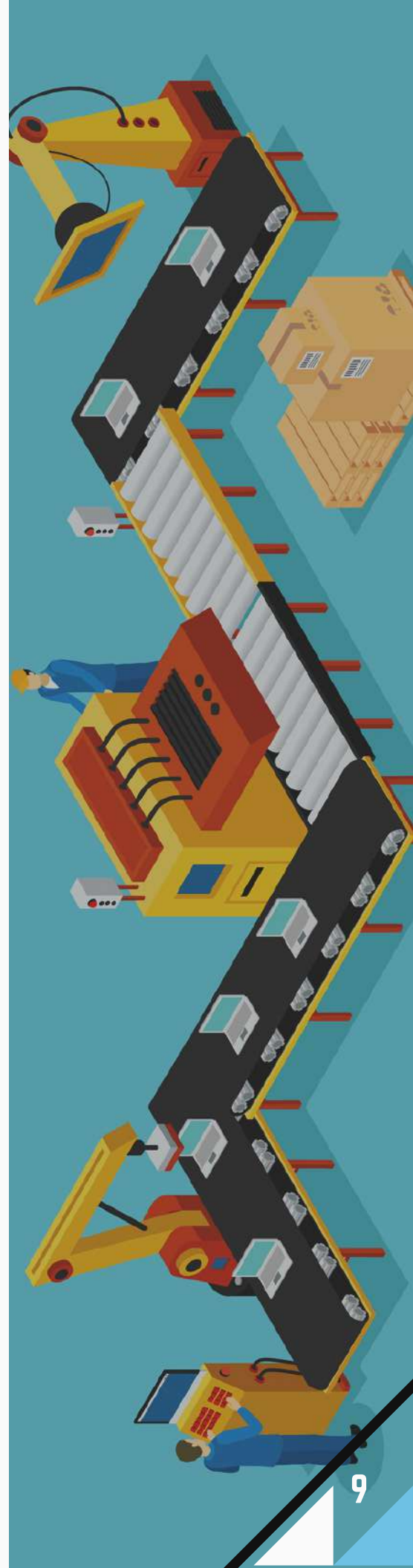
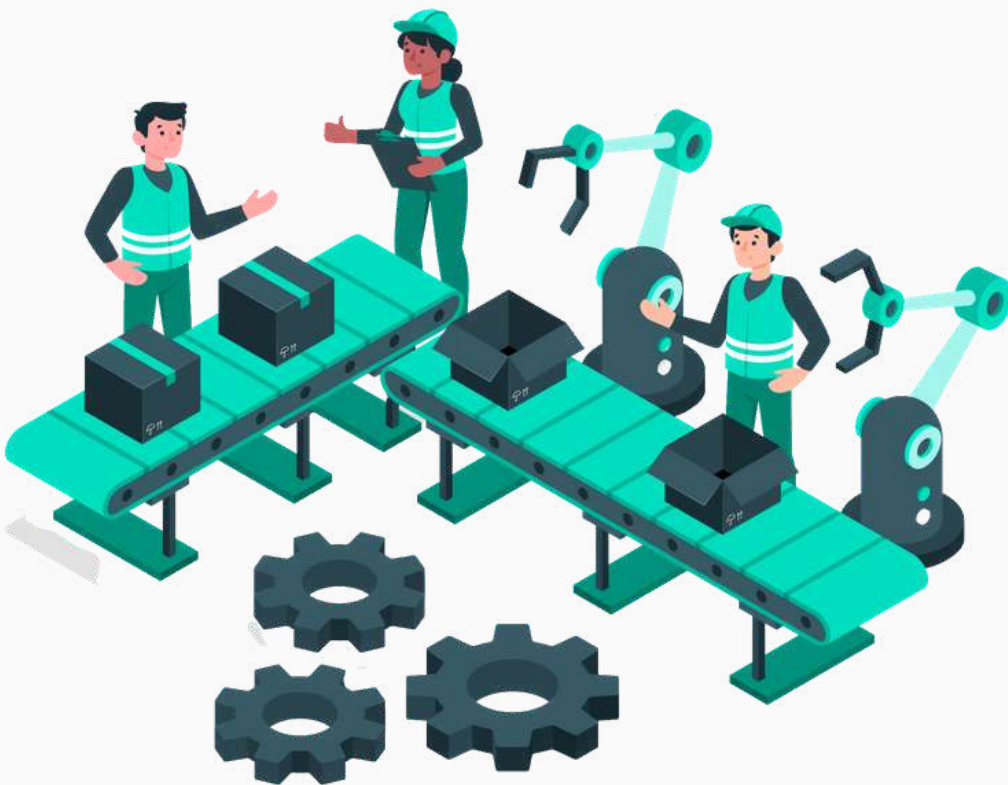
The goods-movement process:

By deploying a solution that helps move the products from one point A to another point B.



The decision-making process:

Allowing the technology to make decisions and perform operations dependent on the warehouse circumstance.





NEW TRENDS OF AUTOMATION TECHNOLOGY

According to the statistics, Just 15 percent of warehouses report using sophisticated warehouse automation in 2020.

Today, automation is no longer a lavish word; most organizations have already exhibited automation in their vertical business. But to make it more agile and lean, we need to train them with monstrous datasets. For instance, clarifying the decision done by deep learning or machine learning algorithms is technically very challenging, particularly matters for real-time use-cases.

Below are some of the tips to guide inventory system in the warehouse:



Autonomous mobile robots (AMR):

AMR is a smart technology that can move and perform various operations within the warehouse environment without human supervision. These robots use maps and sensors to navigate and analyze the warehouse floor's obstacles. Additionally, the AMRs can perform other order fulfillment operations like transporting the goods material, bolstering the warehouse associate to complete the tasks, etc.

Below are some of the tips to guide inventory system in the warehouse:

- Reduces the walking time
- Directs the workflow to amplify precision and potency in the workspace
- Lessens the everyday human tasks

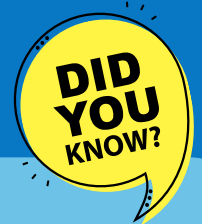


Autonomous Guided Vehicles (AGV):

The AGV deployed in the warehouse for moving products from one place to another place, pick and pack orders operations. These vehicles can be a suitable replacement for the traditional picking procedure. There are three main types of AGV such as tugger, unit load, and forklift.

Here are some benefits of Autonomous Guided Vehicles:

- Heightens the warehouse's efficiency and productivity
- Obtains less space
- Improved safety and flexibility



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

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Aerial Drones:



The aerial drones deployed in the modern warehouse for several purposes such as roof investigation, surveillance, anomaly detection, tracking in-house products, navigating the product's location in the warehouse, and lifting and move parcels within the warehouse, and managing the inventory system.

Benefits of utilizing drones in the modern warehouse:

- Multi-tasks several operations.
- Minimizes the capital expenditure
- High reliability
- Enhanced efficiency
- Improved safety
- Produces the precise data

Automated dimensioning system:

According to the current pool, industries with organized order rates of 85 percent or higher are three times profitable than those with perfect order rates of 60 percent. Inaccurate measurements are the standard issue in the warehouse. Unnecessary charges have always been a massive pitfall during shipping the products to the warehouse, which ends in paying an additional amount during the delivery. The automated dimensioning systems are a smart solution deployed in warehouses to calibrate the packages' dimensional data.

These automated dimensioners come in two different types such as pallet and parcel dimensioners. The pallet dimensioners assist in calibrating the dimensional information of huge pallets of varied sizes. The parcel dimensioners help estimate the dimensional data of packages such as cubes, cuboids, polybags, and any other irregular shapes in less than a second. Without the benefit, no organization would invest in automation.





Here are the benefits of using an automated dimensioning solution in the warehouse:



Pickup warehouse potency:

The conventional dimensioning practices are too time-consuming, resulting in spending pointless freight tariffs and lowering work efficiency. Failing to deliver a product at the correct time would be a different kind of headache, which shrinks the customers' excellent impression toward the vertical. With the appropriate automation, we can speedily boost the warehouse potency effectively.



Increased dimensional calibrations:

Ever wondered why warehouse firms choose dimensioners? It's because suitable dimensioners can generate more money! An improved dimensional calibration can hastily speed up the work cycle that results in heightening the workflow.



Lessens the dimensional miscalculation:

Most of the warehouse still follow the traditional dimensioning approach, where the warehouse associate uses tape and ruler to calculate the length, height, width, and breadth and then calculate the weight of the parcel that is a hectic task and sometimes causes the error in the dimensional calculation. To eliminate these hand-held dimensioning methods, we need to deploy dimensioners to lessen the non-automatic works.



Assists in space and storage:

Space and storage are the two fundamentals considerations of the warehouse. The warehouse always works hard to ensure the space during the seasonal times, also. By organizing the area in the warehouse, we can store more products in terms of future readiness.



HOW WILL AUTOMATION TRANSFORM THE INDUSTRY LANDSCAPE?

Automation would play a notable role in the warehouse and logistics vertical. It is relatively straightforward that robots would deal with various warehouse operations such as collecting and depositing the pallets and cartons, crisscrossing the floors, handling the overall inventory systems, examining for any damages in the boxes, and many more.

Everything needed to be uniform to work productively; in forthcoming decades, most manual operations would be supplanted by warehouse robots, with 24 hours work cycle. From an environmental standpoint, the warehouse roofs would be covered with solar panels to produce energy to recharge robots and autonomous vehicles.

The deployment of automation can do much to lift the worldwide economy and increases global prosperity. According to the current pool, Automation technology can heighten warehouse and distribution centers' productivity by up to 60 percent annually over the following decade.





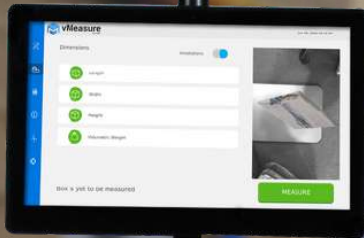
FINAL WORDS

There is no magic way to build an effective warehouse, but we can fasten productivity by enhancing the right equipment. Centering the fact, the warehouse is now opting for the automated dimension solution as the first-step automation phase. These technologies may evolve to face a significant change in the coming days, and this all starts for the warehouse!





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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