



VisAI Labs

# HOW THE OVERALL SUPPLY CHAIN BENEFITS FROM AUTOMATED DIMENSIONING



visailabs



# Summary

Like most other industries, supply chain and logistics are confronting a drastic transformation. The current pandemic has brought innovative settings where automation and eCommerce lifestyle adaptation have become a new normal.

ECommerce's evolution has made most people's lives easier, meaning individuals have begun adopting the latest technologies. Latest trends are thrusting the supply chain ecosystem to procure various advancements like automated dimensioning solutions to lessen most human works.

This article helps you get a transparent insight into how the overall supply chain benefits from automated dimensioning systems.

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## The raising supply chain in the warehouse

In the recent decade, the evolving eCommerce has transformed an individual's shopping perception, which made a colossal swift in consumers' real-time shopping experience. As innovation expands, consumers become more comfortable

with online purchases, resulting in enormous online order requests. By this, most supply chain owners forcibly permit deploying automation technologies to their vertical to brush up working potency.



## Supply chain a game-changer in the logistics industry

Over the last three decades, the logistics sector has encountered a mammoth shift, from planning each operation to automating all of them. Major eCommerce industries have begun reevaluating the way they need to outline the supply chain framework. To automate the task, we need to kill most manual work, yet before that, the industry should get a better insight into what sort of operation is to be automated; this includes all type of redundancy tasks, say, for instance,

we can acquire the automated dimensioning solution to eradicate traditional dimensioning technique which is again a time-lagging methodology.

As eCommerce remains to outgrow, customer expectations become a vast consideration. To fulfill the customer expectation, the company needs to concentrate on various horizons like operational effectiveness to revamp the organization into a digital supply chain.





# New approaches to future digital supply chain

*The growing digitalization empowers organizations to address new prerequisites of online customers, including*



## SPEED

When the buyer wants to purchase a product, they want same-day or one-day delivery. This shipping practice becomes conceivable by empowering accurate advanced forecast demand reports.

These forecast reports should not carry every month but track every day for quicker doorstep delivery. The slack in the delivery cycle would be a source of immense frustration for the consumers.



## FLEXIBILITY

Planning superior service in a supply chain is a crucial phase; the industry needs to concentrate on a significant area like enabling

a flexible transport capacity and expanding the distribution centers. Guaranteeing flexibility in the supply chain would scale-up business growth.



## ACCURACY

With the appropriate information, the industry supply chain can grow up several times. The precise data can determine the sort of change we need to focus on to improve its workflow.



## PRODUCTIVITY

This includes having detailed inventory and warehouse data, Keeping track of in-house products, having nitty-gritty stockpiling reports.



## EFFICIENCY

Efficiency is built by perfect planning; most of the organization's automation has been built to enhance productivity in the workspace. In other terms, supply

chain efficiency is referred to as getting the right product at the right time at the least cost. The fulfillment of customers' rates estimates the overall supply chain efficiency.



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# Building an effective supply chain for the logistics and warehouse industry

*Recently, the growth rate of logistics and warehouses is expanding wide also the supply chain. The ultimate warehouse and logistics goal is to supply the products to the customers with zero damage concerns and cost-effectiveness. We can now define the strategy of building an effective supply chain for the logistics and warehouse industry.*

As the industry continues to expand, there include four strategic levels to be focused on:



## STRATEGIC



This is the phase where the initial preliminary review process undergoes to set an effective supply chain strategy.

## FUNCTIONAL



In this phase, we can define the sort of function and operation to be performed based on a priority scale.

## STRUCTURAL



Once the review phase gets over, the structural stage begins; it includes determining the type of product to be stocked up based on the seasonal demands.

## IMPLEMENTATION



Through this, we can implement the specific plan and check out its outcomes.

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*At the point when the business elevates its level, it should monitor specific components that even strengthen its supply chain level. Below are some of the essential ingredients to be considered while building a viable supply chain for the logistics and warehouse industry:*



## CUSTOMER REQUEST CYCLE :

This component occurs when online requests are processed, prepared, and shipped to the customers on an estimated timeframe.

The industry calculates the customer order cycle by dividing the annual demand by order quantity.



## PICK-TO-SHIP PROCESS:

It is the soul of the order fulfillment phase. Once the customer orders the product, the warehouse's software generates the item slip, and then the

warehouse associate picks the items from the shelves, then packs them safely, and labels the shipping label. And the last step is, the orders are sorted and set ready for delivery.



## PRODUCTION :

With the assist of the production plan, the products/items are transported from the

warehouse to other distributional hubs and then to the customers.



## INVENTORY:

It is the area where the various operation such as quality and accuracy of the product is

analyzed and moved into the warehouse for further customer conveyance.



## FORECAST ACCURACY:

It is an important segment in lowering the inventory level associated with the scrap cost.

An accurate forecast report helps identify the industry's growth level and financial grounds.



## OVERALL EXPENSES:

Include managing all sorts of costs such as transportation, warehouse activities, investment in

time and goods, fuel, electricity, maintaining the equipment charges, operating supplies, and disposal charges.

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# How supply chain automation is transforming the viewpoint of 2021

*As the rising eCommerce begins to evolve, various warehouse and logistics industries strive hard to automate the multiple operations. By automating several iterative processes, we can lessen various manual works. With the increased supply chain, we can rapidly upgrade logistics and warehouse production.*

Here are some of the technology deployed to make warehouse and logistics operations simpler:



## DRONES:

Most businesses adopt drone advancement initially for supplychain management. The warehouse uses drones to inspect the damaged products, roof inspection, collecting the in-house product details, tracking the delivered products, generating the overall shipped product details, moving small packages from one place to another, and surveillance. With drone potential,

the organizations can uplift production speed, deliveries and reduce the pointless freight tariffs. details, moving small packages from one place to another, and surveillance. With drone potential, the organizations can uplift production speed, deliveries and reduce the pointless freight tariffs.



## VEHICLE AUTOMATION :

Autonomous trucking bought in warehouse and logistics market to reduce unwanted transportation issues. Autonomous vehicles can move faster compared to normal ones. The significant benefits of deploying autonomous trucking are: it saves transportation costs, lessens driver shortage issues,

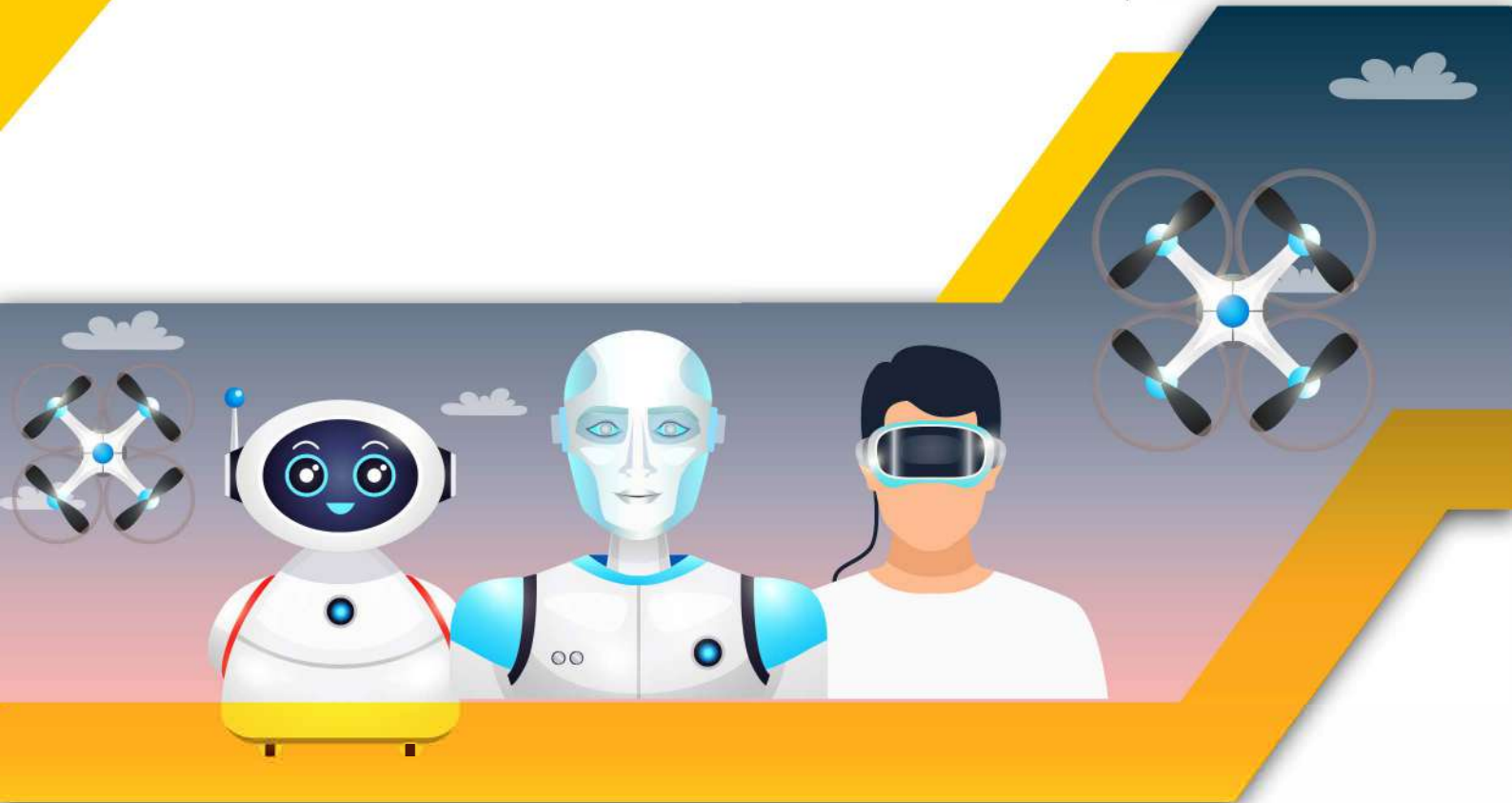
and can change the location of distribution centers. As the demand grows faster, the eCommerce businesses need to rush up the conveyance; in this scenario, autonomous trucking becomes more beneficial for the supply chain.



## FORKLIFTS:

The forklifts, which come in various sizes, helps to lift heavy load packages. There are two different types of forklifts, counterbalanced forklifts and reach-type forklifts. The counterbalanced forklifts can drive close to the load to pick and move it. These counterbalanced

Forklifts are further classified into stand-up and sit-down forklifts. The reach-type forklifts are utilized in narrow walkway application; additionally, it is intended to have two external legs that help distribute the load and a single set of wheels at the back.



### SMART GLASSES:

It is an advanced innovation that lets users interact and work it out using voice direction. These smart glasses

can read bar codes, upload and display database information, and ameliorate efficiency, enabling them to multitask.



### AUTONOMOUS MOBILE ROBOTS (AMR):

It is a recent innovation in the warehouse industry. These robots can move and perform indoor operations in the warehouse. These robots can move, operate and

perform various functions such as supervising the overall inventory information, keeping track of in-house products, and navigating the product's location within the warehouse.



### RUGGED TABLETS:

Warehouse and distribution centers naturally depend upon the in-house product information, including receiving to picking, and staging to loading the products. Handling multiple tasks simultaneously is intricate; the rugged tablets' bolster the complicated

data collection technique. Rugged tablets' top three benefits include enhanced data accuracy with decreased human error, quick data capture, and integrating with barcode scanners to navigate items' location



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## AUTOMATED DIMENSIONING SOLUTIONS:

Inaccurate measurement is always a troublesome part of an effective supply chain. With error-free dimensional data, we can quickly construct a robust operational practice in the industry. The traditional dimensioning method has always been a time lagging system, where the warehouse associate use tape and a ruler to calibrate the dimensional data of the product. The automated dimensioner is a smart technology established in the warehouse to estimate its dimensional data in less than a second.

We can classify automated dimensioner into parcel and pallet dimensioners. The parcel dimensioner helps measure the weight and dimensional information of small-sized packages of varied shapes such as cubes, cuboids, and polybags. The pallet dimensioners aids in estimating the weight and dimensional information of pallets. These dimensioners are further integrated with the barcode scanners to navigate the packages' location. Industry chooses either one or both types of dimensioners based on the vertical requirements.

Here are the significant **benefits of having automated dimensioning solutions** in your warehouse to revamp the overall supply chain:



### ENHANCED CARTONIZATION:

Helps determine the right box size for the products, saving adequate time to think which box would fit the product during packaging.



### FUTURE CAPACITY PLANNING:

With a piece of relevant dimensional information, we can speedily determine the warehouse's available room space for future shipping. Besides, the dimensional data assists in generating the forecast reports for the product.



### ENHANCED ACCURACY AND TRANSPORT TARIFFS:

Accuracy is an integral part of the warehouse and logistics industry. Without valid information, it becomes difficult to know whether both the industry proprietors and consumers can pay the shipping products' necessary amount.



### REDUCED HUMAN ERRORS:

The traditional dimensioning practices can produce more dimensional errors, ending in unnecessary transportation costs. With automated dimensioning systems, we can instantly eliminate dimensional data errors and save time.



# Why is it a "now" moment for warehouse modernization?

*As time passes, various eCommerce sectors have understood that investing in warehouse and logistics automation can aid various human-held issues. Besides, warehouse automation can boost efficiency, accuracy, and productivity, which is more beneficial in last-mile conveyance.*

The crucial benefits of modernizing the warehouse and logistics include:



## INCREASED DROPSHIPPING:

The dropshipping trend permits manufacturers and wholesalers to build the overall revenue and gain more customers by building direct-to-client channels.



## QUICK CONVEYANCE:

After ordering the product online, the price is no longer the competitive differentiator; however, receiving the product on time turns a fundamental part. In forthcoming years the fulfillment responsiveness would increase exponentially.



## OVERFLOW OF ONLINE ORDER REQUESTS :

Social media has become an indispensable piece of the human lifestyle. According to the poll, there is a massive demand for social media marketing, which encourages almost 34 percent of the populace to order products through social media sites, bringing a flood of online requests. Because of this, most organizations should speed up the working proficiency.



## FLEXIBLE PICKUP METHODS FOR MULTIPLE ORDERS:

Picking and sorting is the one genuine cycle that requires more focus. Enabling adaptable pickup methods can diminish the pointless conveyance costs and significantly increase its supply chain throughput.



## Final words

Industries are digitally transforming to overhaul the supply chain; the verticals need to begin applying for the latest technologies like Edge AI, computer vision, and deep learning in everyday practice. However, applying advancement in the supply chain management is to simplify the function by eliminating redundancy. Stepping into the initial step of automation, various industries have deployed automated dimensioning solutions to limit the supply chain risks and guarantee fast-paced production in the vertical.





## 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:**  
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**Tubes | irregular shapes**

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