



Unleashing  
urban  
warehousing  
potential

**The next phase of growth.**





In today's digital-first market, warehousing companies that thrive and succeed are the ones that can deliver a consumer-centric, individualized, and infinitely customizable experience. The last decade saw the emergence of the mobile-first, impulse-led, yet-extremely price and time conscious and always-connected millennial customer, who has largely been the shaping force behind the evolution of warehousing and fulfilment facilities.

Companies in the fulfilment business the world over are not only competing with each other, but also within themselves to iron out all the inefficiencies and system and environment-led delays that stop them from progressing into their next level of growth. One of the ways that warehousing companies can crack the code is by hacking the vertical paradigm - in simple words, to grow vertically in urban centres.

A Deloitte India and Retail Association of India report pegs the Indian ecommerce industry at \$24 billion in 2017, forecasting it to gallop into a \$84 billion market by 2021. Meanwhile, the changed dynamics of shopping among urban population due to the Covid-19 pandemic-led lockdown has been why

Global Data, a London-based analytics firm revised previous estimates, and now expects Indian ecommerce industry to grow to a whopping \$92 billion by 2023.

By going vertical, warehouses can counter mounting urban pressures such as the skyrocketing land prices, traffic snarls, shortage of good manual labour, and most importantly, next-door access to the most important person in the business, the customer. A recent Australian study has revealed that while transportation consumes 50 percent of all shipping costs, warehousing only accounts to less than 10 percent of it.

A Deloitte report tells us that In New York city, about 10 million people buy ecommerce goods worth \$16 billion annually, within 20 mile radius of the Empire State building! That is a great indication of how concentrated urban spending power is. That report also says that all customers look for are three points: See now, Buy now, and how fast can I get it? In countries like India, the triumvirate of high population density, strong ecommerce penetration, and a tight competition make vertical warehousing solutions a great fit for a warehousing company looking to clock in its next level of growth.





## Broad industry shifts that lead to a vertical-first approach:

**Greater transparency from assembly line to doorstep** where real-time data on order fulfilment is not just a premium, but is a rudimentary aspect expected by the customer by default. Data-led cost and time savings that assure substantial value to the customer, which become the purchase decision maker. Online grocery retail is one of the major areas for warehouses to go vertical, because of the high volume and low margin nature of the industry, added to the constraints involved in storing and shipping temperature-sensitive goods.

**Changing consumer patterns** have made the customer more discerning than ever before, and same-day deliveries that were a status symbol five years ago, is now an expected standard among customers, especially among the urban population. Online retailing is mainly a logistics business driven by the incremental improvement in cost savings, order fulfilment and delivery capabilities.

Automation is crucial for customer fulfilment as it requires increased use of warehouse automation solutions to manage costs. Given the challenges of today's market scenario where customer's expectations skyrockets every years, the hard truth is that only those who boldly venture towards disruptive technologies in their warehouses and their compliance centres will survive and prosper.

**Intelligent and agile supply chain methodology** that can flex itself to suit the ever-changing needs of the customer, such as festival-time spikes to lean days, such as the recent Covid-19-led lockdown. Warehouse automation systems will improve both the picking speed and the volume as the amount of human contacts reduces the pick-up inaccuracy.

Successful organizations are those who master analytics tools to devise improvement strategies to maximize productivity and gain. The combination of sensors, scanners, and RFID tags with warehouse control systems and verticalized automated material handling equipment will take operational efficiency and safety up by several notches. The technology also enables inventories to be detected and monitored in real time, further helping to streamline the logistics process and reduce errors. Inventory savings from vertical warehouses that have reduced footprints can be up to 85 per cent and the running costs can be reduced by up to 65 per cent. Storage savings are mostly accomplished by storing larger and denser units. Also, a declines in operating costs is another plus, thanks to decreased demand for manual labour.



**Intensive usage of robotics and optimization of manual labour** to reduce cost and increase profitability. While the bots kick in and take care of efficiency mapping and waste reduction to create a smooth flow, workers can spend their human intelligence on more value-adding activities, and not sweat after the small bucks. Robotics and automation have now become key for any ecommerce company's success. Leading the way are the AMRs and the AS/RS systems that are essential for quick, secure, and error-free delivery, short time to market, reduced costs, and end-to-end trackability to ensure complete peace of mind for the clients. The need for AGVs/AMRs will increase from 2019, and would peak at 2025, followed by the ASRS and order picking technologies that eliminate downtime, decrease infrastructure costs while not needing change in current infrastructures for their deployment/implementation.

Autonomous robots are known to improve order fulfilment productivity to accomplish horizontal and vertical travel. A solution not connected to the warehouse's physical infrastructure is interesting for activities with poor visibility, while factoring in high peak seasonality in expected sales volumes. However, at the start of the operations, capital costs are high, and return of investments should be calculated before jumping the gun to automate a warehouse.

**Optimize inventories and assets** to bring lean flow till the last mile, with the help of evolved software such as machine learning technologies. Machine learning technologies that replace, upgrade, transform human effort is the need of the hour. Besides, most human labour in warehouses are wasted in pick and place operations that can be readily automated. Be it dark stores that back-up the supplies, or in-shop picking concepts, picking robots can supply 3 to 5 times human productivity by improving task interleaving, travel time, overtime, and training costs. This results in substantial cost savings as human labour can now work more comfortably and quickly in their defined workspaces.

Driven by the rapid growth of ecommerce and omnichannel compliance plus external factors such as global tariffs and persistent labour shortages, the transformation of warehouses into verticalized lean spaces will unleash the next wave of growth.

The benefits of robotic automation in vertical warehouses extend beyond the recent pandemic-induced changes, such as climate change and resource scarcity. Since the Coronavirus has exposed vulnerabilities in the global supply chain, it's time to start thinking strategically and holistically about how the world economy can ensure minimum damage and maximum resilience. It is imperative that Government of India's target of taking India to a \$5 trillion economy by 2025 needs effective investment in terms of technology to scale up India's supply chain system.

At the end of the day, there are still no off-the shelf solutions in warehouse automation, as each system is customized to fit individual warehousing needs, and to match with the business needs. Therefore, the right system to select will depend upon the desired range of goods, and the degree of organizational flexibility required. This will entail installing fixed conveyors that requires careful consideration of how it will affect the movement of people and goods around the warehouse while solutions from AMR are more adaptable in the warehouse. Those who desire to look up success stories may turn to Europe, where manufacturers implemented automated systems early on in order to reduce production cost and labour cost overall.

**About Bricspac** - Bricspac India Pvt Ltd is a Mumbai-based company that manufactures, assembles, delivers and services customized turnkey end-to-end next-generation warehousing solutions that suit the needs of industries competing in today's connected era. One of India's few warehouse automations providers, Bricspac provides manufactured solutions, and customizes high tech machinery lines to meet the needs of the connected manufacturing era.



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