

Operator dependency is fast-tracking the robotics revolution





Keeping up with new customer behaviors

The COVID-19 pandemic has completely disrupted the way people live and work, creating unprecedented challenges for distribution centers across the country. As more and more customers resort to online ordering and delivery to reconcile social distancing and lockdown, supply chains are pressed to move more products even faster.

Faced with labor shortages, high employee turnover and absenteeism, warehouses are struggling to keep up with changing customer behavior and massive surges in demand. While racing to fill open positions and retain skilled labor, businesses also need to solve for keeping their employees safe from COVID-19. With an uncertain future on the horizon, how do businesses adjust to the new normal while planning for recovery?

Robotics to the rescue

Robotics technology has been making tremendous strides over the past years. It's no longer just a speculative promise of the future. Automation is a powerful, ready-to-deploy solution that can reduce labor costs and drive greater efficiency, productivity and reliability. Many businesses are already confident of its role in the future. The number of robots deployed¹ in warehouses and manufacturing facilities will reach 620,000 in 2021, up from 40,000 in 2016. As businesses try to navigate increasing labor challenges and uncertain economic outlook, automation may be the clearest path to opportunity and growth.

¹ Source: <https://www.supplychaindive.com/news/robot-utopia-facility-low-costs-growth/526483/>

Solving for the new normal

As warehouses adjust to a new normal and start rethinking their long-term business plan, employee health and safety are critical factors to consider while meeting market demand. Confronted by a volatile future and unexpected shifts in consumer behavior, automation gives businesses the flexibility to adapt as operations evolve.

Keeping employees safe



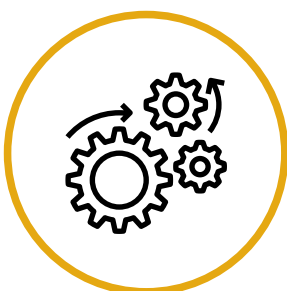
How do you keep employees productive when they need to stay six feet apart? While many businesses have embraced remote work solutions, warehouses don't have that option. By taking over a number of manual tasks, automation significantly reduces foot traffic in warehouse facilities, allowing employees to socially distance while also increasing efficiency and productivity.

Scaling to changes in consumer behavior



The rise in e-commerce is putting greater pressure on warehouses to maintain available stock and meet tight delivery deadlines. Immense surges in market demand triggered by lockdowns complicate things even further. Automation gives businesses the flexibility to scale for peak demand and quickly adjust to constantly shifting traffic patterns in operations.

Solving for shortage of workers



Employee turnover is a big cost for businesses. Automation can reduce labor dependency by taking over manual tasks while also freeing up workers to take on more value-added responsibilities.

Survey findings:

Top challenges & automation needs

To better understand the challenges distribution centers are facing, we teamed up with Vertic to conduct a research survey. We looked at a 500 sample size within the United States. Here's what we learned:

Operator turnover for truck/ material handling

is the biggest challenge. 40% report this as their main concern

40%

Truck unloading & material movement

are the most common uses of automation according to 40 – 45% of responders

40-45%

Automation satisfaction

76% of responders are either researching solutions, in need of help, or not happy with their current automation strategy.

76%

High labor wages

for operators is a priority for 30%

30%

Lift truck operating efficiency

is a priority for 29%

29%

Labor costs can account for 50-70 % of warehousing budgets

Even before the COVID-19 crises, finding qualified labor was a growing challenge. 65 percent of respondents to the 2019 MHI Annual Report² cite that hiring and retaining workers is their biggest obstacle. Moreover, supply chain job openings are growing faster than any other part of the economy with industry growth outpacing the labor pool by a rate of six to one.

But while quality labor is hard to find, it's even more difficult to retain. According to a survey by ARC Advisory Group and DC Velocity³ the majority of respondents reported turnover in the double digits, with over a fifth reporting turnover between 25 and 50 percent. Filling newly vacant positions can cost anywhere from 25 to 150 percent⁴ of the employee's salary and it often takes over a month for new hires to reach peak productivity.

Comparing cost and performance

Human employees



Cost about \$30 per hour, fully burdened Source: [BLS report](#)



Take vacations, have sick days and require breaks



Potential for operator error



Require extensive training

Robots



Cost about \$7-12 per hour*



Work 24 hours a day, 7 days a week, 52 weeks a year



Follow all safety protocols



Travel optimized routes at consistent speeds

*Range based on expected operating cost of approximately \$6 / hr, plus \$4.50 / hr in maintenance.

² <https://www.wsj.com/articles/jobs-go-unfilled-as-the-economy-expands-1533677955>

³ <https://www.dcvelocity.com/articles/29021-nine-ways-to-boost-warehouse-performance-and-cut-turnover>

⁴ <https://www.kanelogistics.com/blog/warehouse-labor-the-real-cost-of-warehouse-worker-turnover>

Cut costs, boost efficiency, grow the business

As companies look to contain costs and reconcile growing demand with the realities of the labor market, considering robotics as part of strategic workforce planning can help bridge the gap. Using automated solutions like robotic lift trucks can help managers address the labor shortage and free employees to advance to more engaging, meaningful positions – helping curb turnover.

Lower long-term costs and investment

When automating processes and calculating the associated payback, direct labor savings add up, with expenses like hourly wages, overtime and holiday pay. But automation drives savings in other ways by helping drastically reduce costs associated with:

- Retraining and re-education
- Insurance
- Workers' compensation
- Lost time due to illness or injury

Reduced mishaps and maintenance costs

According to the Occupational Safety and Health Administration (OSHA), businesses spend about \$170 billion per year on costs related to occupational injuries and illnesses – expenditures that come directly out of company profits. Automated solutions like robotic lift trucks can help reduce the risk of:

- Operator mishaps
- Damaged equipment
- Out-of-budget repairs
- Premature replacement
- Need for backup vehicles to avoid lost throughput

Are you prepared to meet these challenges?

1 Reduce operator turnover

Finding and retaining skilled operators is becoming increasingly difficult for distribution centers. Employee turnover is driving up costs and making it difficult to keep up with growing demand.



The Yale Robotic Tow Tractor takes over long, repetitive manual tasks and has a 15,000 pound capacity rating.

Solution

Long repetitive tasks typically lead to higher turnover. By **automating manual tasks**, you can both reduce dependency on labor while also promoting your skilled operators to more engaging, value added tasks.

2

Keep up with volatile shifts in demand

COVID-19 is rapidly changing customer behaviors and creating new challenges for warehouses. Operators are racing around the clock to fulfill growing online orders while also accounting for immense surges in market demand.



Accommodate growth by storing loads just over 30ft high with the Yale Robotic Reach Truck.

Solution

With robotic trucks you can achieve **scalable automation**, covering a range of applications from low-level order picking to high-bay retrieval and storage. This provides the flexibility required to accommodate peak demand and the constantly shifting traffic patterns in your operations.

3

Minimize warehouse budgets & labor costs

Rising wages, high employee turnover and damaged equipment consume a massive part of a warehouse's operational budget. In times of recovery and uncertain outlook, businesses need to start developing an automation strategy to reduce costs, increase efficiency and remain competitive.



Reduce labor costs by automating pallet transfers up to 8,000 pounds with the Yale Robotic End Rider.

Solution

Not only can robotics help **lower operating costs** by improving labor productivity and reducing product damage, it can also enhance the flow of your materials handling operation which will ultimately improve customer satisfaction. Automation can help reduce operating costs by up to 70%.



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