Strategies for Today's Distribution Center Labor Challenges

Finding and managing distribution center labor has become more complex with the rise of e-commerce. But the argument for investing in automation technology is compelling.

Distributors are feeling the heat from all sides – competition for a diminishing pool of labor and rising labor costs are compounded by higher transportation costs, driven by labor constraints, and margin pressure from increased customer expectations for fast and free shipping. Although there's no simple solution that works for everyone, achievable strategies are within reach. This Special Report analyzes the state of the DC labor market and how technology can help solve today's growing labor challenges.

Although the rise of next- and same-day delivery—the so-called "Amazon Effect"—feels like it's turning the world of distribution upside down, that's only one of a complex mix of factors putting additional pressure on distribution operations. Changes in the availability, cost and quality of labor are driving many operators to review their distribution operations with an eye toward technology for solutions to address the challenges and enable competitive advantage.

Today's DC operators must develop strategies to strengthen operational capabilities, reduce costs and provide flexibility to adapt in a rapidly changing environment. Technology offers solutions, but first, it's necessary to understand the DC labor challenges driving the imperative to adopt new strategies.

Growing Customer Demands, Shrinking Workforce

While customer expectations intensify, the pool of qualified, reliable and affordable labor for DC operations is tight and getting tighter. This is happening for a number of reasons:

- The economy has achieved nearly full employment, increasing competition for workers across all sectors;
- Wages for warehousing jobs, including picker/packer and lift driver, have not kept pace with the rising cost of living;
- Millennials are better educated and they tend to have a poor perception, or lack awareness of logistics careers;
- Baby Boomers, historically a major source of DC labor, are retiring;
- Immigrant labor is no longer expanding due to changing political dynamics;
- Drug testing is disqualifying a larger number of applicants, particularly as the national opioid epidemic continues; and
- Finally, DCs are frequently located in areas of lower population density and hubs where competition for labor is high and driving higher wages.

These forces are constraining labor availability across all levels of staffing, from line employees to supervisors and managers.

At the same time, the rapid growth of e-commerce and customer expectations for faster delivery is driving the need for more DCs, which require more workers.

Scarcity of labor brings with it increased costs in the overall supply chain. And transportation costs are rising at the same time distributors are bearing the burden of higher consumer expectations.

Plus, there are non-logistics demands for more labor, putting additional pressure on DC operations. For example, Tesla is opening a large factory in Reno, offering light manufacturing jobs that pay considerably more than DC jobs in the area. As that facility moves toward full production, the local workforce may be insufficient to support existing distribution and manufacturing operations—driving even greater competition for workers.

Finally, DC operators—along with other businesses—see labor costs rising due to minimum wage laws and rising healthcare costs.

Holiday Cheer Can Cause DC Blues

The real crunch time for many logistics operations occurs during the run-up to the holidays, and has extended to the post-holiday period due to the rise of returns. Manufacturers, carriers and DC operators add lots of labor to meet demand and move more products with greater speed.

During the 2017-2018 holiday season, DC operators saw peak season hourly pay rates rise 10 percent in response to the urgent need for labor to meet the seasonal surge. Other extra-cost labor retention tactics include providing benefits such as free lunches, bonuses, stock incentives, etc. For one DC located in an affluent suburb's industrial park, the need to simply retain existing workers was met by offering a lunchroom catered by a local restaurant chef, daycare and additional costly amenities, such as a gym and upgraded break room facilities.

Adding lots of labor to meet peak demands can potentially result in an oversaturation of staff at key points, creating congestion that lowers overall productivity. And a labor force prone to high turnover can cause even greater unintended cost increases when they fail to show up for work, or if they don't work productively. By contrast, technology that both reduces the need for additional labor while making existing workers more productive, becomes the obvious alternative.

Either way, the cost of all this is coming off the bottom line, even as distributors are being squeezed by customers' expectations for free shipping, faster shipping, free returns and value-added-services. These capabilities are no longer "added value"; they are table stakes.

Technology Boosts Productivity by Reducing Reliance on Labor

Looking ahead, the labor pool is expected to be further constrained, while costs continue to rise. With labor in short supply, the question DC operators face: Do they take whatever steps are necessary to continue to add staff, or is that no longer a viable strategy? In a growing number of scenarios it is no longer economically feasible to use labor for certain activities, or a sufficient labor pool simply does not exist.

Of course, one answer won't fit all circumstances. Nevertheless, technology options that can either increase the productivity of existing labor or, replace it, are now an essential part of the solution.

It does take time to design and implement technological solutions, but there are strategies that can help bridge the gap:

- Thoroughly review opportunities to increase the productivity of existing operations. Does the DC follow best practices, are processes being properly executed, and has every reasonable effort been made to incentivize a productive workforce?
- Re-set customer expectations to match your actual capabilities, remembering that it's better to over-deliver than under-deliver on promises. If it is not possible to meet same-day delivery demands, don't offer it—especially during peak.
- Shift labor to where it is needed, or shift orders to where there is capacity to fulfill. Consider fulfilling same-day orders from stores rather than DCs.
- Consider hiring part-time labor (college students, stay-at-home parents, etc.); though the trade-off might include higher training and recruitment costs than with full-time employees.

Long-Term Technology Strategies for Improved Competitive Advantage

Even while implementing quick fixes, it's important to start developing long-term strategies that maintain the health of your enterprise and, most important, position it to be highly flexible as unforeseen developments occur. This is essential for enabling competitive advantage. Typically, automation solutions take 18 to 24 months for results to be realized.

"There's a perfect storm occurring in the DC, where labor availability is diminishing and labor costs are increasing. And it's only going to get worse," says John A. White, III, president and CEO of Fortna, a professional services firm that designs and implements distribution solutions. "The good news is that new technologies are reaching maturity and often have a strong business case for justification -- goods-to-person (GTP) solutions, autonomous vehicles, robotics, and others can help, and are flexible in ways they weren't in the past. And as technologies become mainstream, we are starting to see commoditization and lower prices. Companies that implement automation now to augment the workforce, or reduce

Labor Challenges: The Good, the Bad, and the Ugly

Here are some examples of real-world dtistribution center labor challenges:

- A wholesale distributor with a DC that relied heavily on manual labor built a new facility. Rather than going with full automation, the new facility made minimal use of automation, incorporating basic technologies like AGVs, a shipping sorter, and engineered pick modules to produce the same output as the old facility with 33 percent of the previous workforce.

- A large omnichannel brand apparel owner hired and trained 200 temporary workers to handle peak, starting on Labor Day weekend. The problem: 25 percent of the new hires didn't show up, forcing managers to scramble to meet demands with insufficient labor.

- A specialty retailer foreseeing that labor availability would continue to decline, impacting DC operations, is designing its newest DC for full automation.

dependence on labor by automating processes, will have a significant competitive advantage over those who wait," says White.

Selecting the Right Technology Requires Balance

Find the level of automation that works best for the business, and even for each DC. The first questions when considering technology solutions for the DC are likely to be, what about the time, the management resources, and the business case for such a significant change? Is it justifiable? Is it flexible?

The introduction of new software and automation is usually not simple, and it requires research and careful planning. Fortunately, many of today's technologies offer greater flexibility than ever. Operations design can be structured to enable incremental implementation and investment so that CapEx can be spread out over time, allowing businesses to add technologies and capacity that meet needs as they arise.

For the near future, most automation implementations will be focused on reducing reliance on labor, rather than eliminating it. Material handling equipment, systems and autonomous robots have been developed that no longer require an either/or choice regarding labor. Rather, there are many good options featuring lighter and more flexible automation, such as robots that can function alongside workers, helping them become more productive.

In many instances, the first and best opportunity for implementation of automation is picking and packing. These are the most labor-intensive aspects of DC operations. One of the key factors that drive up labor costs is the travel required by each worker to traverse a large facility. Travel adds cost, not value. There are several technology solutions that optimize and eliminate travel, or increase storage density to reduce travel while increasing throughput and reducing order cycle times.

For packing, there are proven technologies that greatly speed labeling, packing, insertion and value-added functions. Any technology that increases productivity does more than reduce costs. It also enables a DC to meet customer demands for faster order cycle times. While achieving a 50 percent reduction in labor, one successful implementation also met a steep increase in direct-to-consumer demand by allowing later cut-off times for completing orders in the DC.

Because it's not possible to predict how customer requirements will evolve, these flexible solutions will support a more nimble enterprise, one that can adapt and maintain competitive advantage over time.

Determining what is appropriate depends on many factors, including:

- Service expectations, order profiles, volume, and product characteristics;
- Existing DC capabilities, which can vary from manual operations to low-level automation or highly automated;
- Acceptable levels of risk including ROI, impacts on cash flow, impact of change, flexibility required and sensitivity to labor shortages.

Whatever the situation, it makes sense to work with a qualified distribution consultant who can help create a technology road map, develop a business case for investment and navigate through manufacturers' offerings. The "horror stories" around failed DC automation usually result from implementation of systems and equipment that were too rigid for changing business conditions, or systems that weren't properly integrated. Success is dependent on both art and science that considers all the variables and leverages the flexibility points that have the most impact on overall performance. An experienced, reputable consultant will have the industry knowledge to optimize a solution for the unique needs of the business and analyze the tipping points to ensure that the solution provides flexibility for the future.

It's always been about achieving a balance between cost and service, but today's operators must also consider the risk that labor may not be available, or too costly to sustain margins. More than ever distribution operations must be built for flexibility as the industry continues to evolve and the future comes into focus. New technologies are available today that reduce risk, increase flexibility and are cost-justified. With the right strategy and knowledge, labor challenges can be turned into opportunities for competitive advantage.

The Business Case for Automation

- Demographic trends indicate further decrease in the available labor pool.
- Rising health care costs and competition for workers continue to increase labor costs.
- Automation can increase productivity without increasing head count.
- Technology drives greater accuracy and reduces human errors.
- More efficient operations enable shorter order cycle times and later cut-off times.
- Technology makes training new associates easier – reducing training cost and time to value.
- The cost of technology is trending down.
- Newer technologies are available that enable flexibility for an uncertain future.