

WHITEPAPER

Doing more with less

Using innovative technology
to overcome warehouse
labor shortages

Introduction

Chances are you have a loyal core team on your warehouse floor. These are the people you trust to keep your operations in check, to always hit their numbers, and take new team members under their wing. These are the people who keep things moving. You know they will always be there—even when the going gets tough.

It would be ideal if your entire workforce had the same grit, determination and dependability as that core team, but the nature of warehouse work means this is very rarely the case.

When seasons peak, and supply chain demand increases, it does so across the board. Up until recently, the only answer to tackling the many and varied challenges was more human hands, but that is a difficult order to fill, and it's only getting worse.

Labor shortages have been, and continue to be, one of the biggest challenges faced by any warehouse operations manager, world-over. But there could be a solution, one which will mean your trusted and loyal core team may well be the only people you need.

That solution is innovative technology, focused on making the most of the valuable skills of your best workers.



The challenge

Warehouse labor shortages

When the economy is strong, all major markets will suffer a labor shortage. The demand increases, and supply struggles to keep up. This is especially true during seasonal peaks, where the need for labor increases in short bursts in warehouses and distribution centers.

It's a challenge that comes with many expensive pitfalls, including recruitment and training costs, and all for workers who will usually elect to move on when the season ends. It is a role which, traditionally, has a very high turnover rate at a high cost to the business.

Meanwhile, in the background, the rise of eCommerce, and the popularity of distribution sites such as Amazon, means every supply chain is being challenged to deliver faster and reduce costs for the customer, i.e. offering free and same-day delivery. This means this increase in demand is becoming evergreen, as opposed to seasonal, which has resulted in the labor shortage issue growing year-on-year.

This is a consistent concern for the entire supply chain market. Being unable to find workers is one of the biggest challenges any warehouse or distribution center could face, and it requires a technical solution.



“The old worries of robots coming to take jobs isn’t relevant anymore. Now, the worry is there is no-one to do the jobs in the first place.”

Anton Du Preez
Group Sales Director for Infios Voice

What causes labor shortages?

An economy being strong also means that the unemployment rate in the relevant country is likely to be low. This results in less of a market for temporary workers, which is exactly what you need during peak season. Compounding this problem is the fact that these peaks often happen at the same time. The pool of available workers is rapidly depleted by this demand, and that pool is becoming smaller every year.

While warehouse work can have its benefits in terms of work-life balance, flexibility, and greater control of income through incentive schemes etc., it can be repetitive and physically demanding. This is especially true if the warehouse in question is not properly equipped to help the team members work safely, efficiently and productively.

Why those essential roles aren’t being filled is often dependent on the circumstances of the specific market.

For example:

UK and America

A drive on higher education and the consequential desire for more desk-based jobs has caused a decrease in the amount of people wanting a manual job.

China

The one child policy was in place for 35 years, leading to an ageing workforce. The policy finally ended in 2015, but it has meant fewer people in general are available for work, which will still be the case for many years yet.





Doing more with: voice directed technology

What is voice-directed work?

Voice-directed work (VDW) means hands-free and eyes-free operations for faster, more accurate work with less scope for error. It works by sending workers directions through a headset. Once the task, or the stage in the task, is complete, their responses are recorded in real time and sent back into the system so a new direction can be given.

So far, it can benefit over 20 different workflows, including:

- Picking
- Replenishing
- Put-away
- Cycle counting

Productivity

By removing the need for screens or paper, voice can generate up to 35% increased productivity. There are no distractions, and instructions for new tasks are delivered via a headset as each task is completed. This keeps team members, and operations, moving.

Accuracy

The hands-free, eyes-free method reduces mis-picks by up to 50%. The warehouse worker receives clear instructions by voice, and every step in the process is validated by verbal feedback. This enables the workforce to keep their eyes locked on tasks. VDW can easily be integrated with barcode scanning too.



“We’ve been so pleased with how voice has gone for picking that we are evaluating all areas of the distribution center to see if we can further the benefits. Right now, I’m looking at extending it into our replenishment workflows to work with our forklift operators, and possibly in our returns processes.”

Paul Courchene

Logistics Core Team Leader for Patterson Companies

Training

Voice training is incredibly easy for team members of any level to pick up. So easy, in fact, that new or temporary workers can get up to speed in less than one day without taking valuable time away from your core team.

Efficiency

More efficient training and onboarding means increased productivity. By providing simple, step-by-step instructions over the headset, new operators become productive quickly, reducing training to less than an hour.

35%

Up to 35% increase
in productivity

25%

Up to 25% more
accurate

50%

Up to 50% less
training time

50+

50+ languages
available



How does voice answer the challenge?

VDW addresses most of the challenges facing today's warehouses and distribution centers—including labor shortages. It does this by empowering your core team, so they can complete tasks in a more ergonomic and efficient way. The more productive your existing team is, the less need there is for new workers. If new workers are still needed at any point, they can be brought up to speed quickly and match the productivity of the rest of your team within a matter of days.

The Android interface is familiar and easy to use, and because younger workers are familiar with Alexa and Siri, much of what they're being asked to do won't be dissimilar from what they're doing at home. This could be a unique "selling" point for attracting temporary workers, who will find the work far more satisfying and fulfilling than when working with paper, RF scanning or pick-to-light.



"Voice helps you retain who you've already got, and grow your business. You could grow by 10%, without having to hire 10% more people. We have seen clients reduce temporary labor, and even stop it entirely, after installing voice."

Anton Du Preez

Group Sales Director for Infios Voice

Doing more with: robotics and automation

What is warehouse automation?

Warehouse automation is using robots, autonomous vehicles and other specialized machinery to fill some of the more labor-intensive functions in a warehouse. These are, typically, the dirtier and more dangerous movement-orientated activities, such as:

- “Walking” to different picking points
- Pushing carts
- Finding the correct pick path
- Picking up heavy items.

The human value comes from the picking itself, which involves a keen eye for detail, and quick and careful manual handling. Warehouse robots decouple the majority of the movement from the picking, meaning the most valuable stages of the workflow can be focused on by people.

It’s a flexible solution, with several different ways to automate, dependent on your business’ and team’s needs.



“People can do things that robots can’t do; you can’t do a complete job without them. The real value of technology is when it augments with people’s ability, to help them be better at their jobs.”

John Santagate
VP of Robotics for Infios



Types of robot



Category 1: AMR (autonomous mobile robots)

These are “cobots”: robots and people moving and working together on the warehouse floor. This model includes “goods-to-person”, where the robot brings the product—or a unit of products—to the person.

For example:

Instead of having team members walking up and down long aisles continuously, the robots bring the necessary rack to them—a system used by Amazon.



Category 2: AGV (automated guided vehicles)

These are essentially automated vehicles, such as forklift trucks. These will follow fixed paths, which will prevent them from bumping into each other, as well as helping them know which way to go. This limits their ability to adapt to a dynamic environment.

For example:

An AGV moves continuously along a predetermined path, shuttling material along it.

How does it answer the challenge?



Increases efficiency

Team members are able to pick more frequently and could have several orders being completed at the same time.



Increases capacity

Allowing automation of the low-value tasks, such as pushing the items around, means fewer tasks for the person. This gives them the space for more valuable activities.



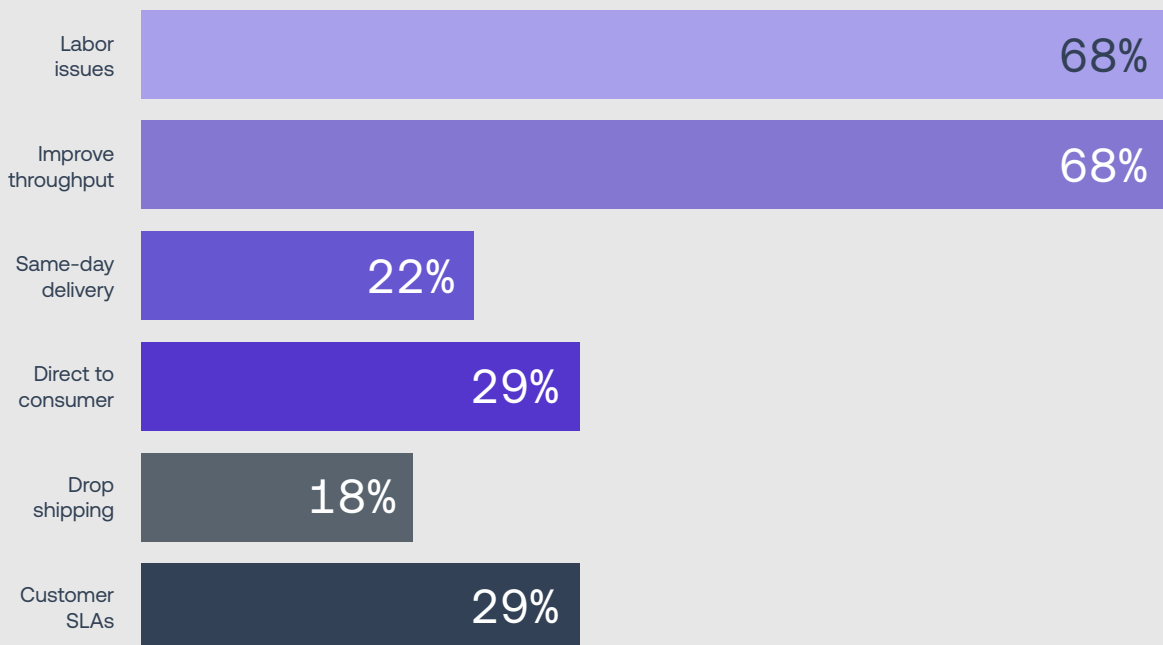
Increases productivity

A faster turnaround, and more picks being processed, leads to better throughput and increased revenue.

Of course, different warehouses will experience peaks differently. The purchase, or hire, of robots to alleviate productivity pressures is completely scalable, and can adapt to your business' needs. They can be permanent fixtures, or they can be rolled out only when required.

Unlike new team members, they will come with the knowledge necessary to do the tasks at hand deployed into their skillset, and can be stored or returned when not in use.

The key drivers for warehouse automation



(Source: HighJump Warehouse Automation and survey report)

Doing more with: voice and robotics

Could robotics and voice work together?

Warehouses will always need people on the floor, no matter what. But technology must be properly utilized to make the most of the investment in people, and to mitigate the need for temporary workers. VDW and robotics innovations could easily, and readily, be combined for a two-pronged solution.

The biggest benefit of voice is its hands-free eyes-free nature. This is the safest and most productive way for your team to operate. As it stands, most warehouse robots still require engagement through a screen interface. However, there is now an opportunity to use voice instead.

For example:

- The worker could “take the reins” and speak directly to AMRs, calling them—and the goods they carry—over by using their voices
- AGVs could also be assigned to a voice-directed worker, to help them with product delivery, retrieval, or placement on high-bay racks

Both examples could add a new level of job satisfaction and fulfillment to the workers entrusted with the command of their robot helpers, making “warehouse operative” a more appealing role for your core workers. This could improve both recruitment and retention for your business as a whole.



“The two solutions, integrated, give the best outcome. If you add them together you get a cumulative gain.”

Anton Du Preez
Group Sales Director for Infios Voice



Early adoption of the combined technologies

While the capability for combining VDW with robotics is available and ready to go, there are only a few early adopters in the world so far, all using Infios's automation and voice systems together as one.

A site in France is using an Infios system where voice is used to direct an AGV which the workers can ride around the warehouse, and to where they need to be to do their value-added tasks. There is also a site in Australia using a similar system.



“Wherever there’s a human involved, voice will have a place in the supply chain.”

Anton Du Preez

Group Sales Director for Infios Voice



“Historically, supply chain automation was put in place to tell humans what to do. But that’s slowly changing. We now need to think beyond the human, and ask ‘What can people deliver that robots can’t?’ and find value-points in what people can do.”

John Santagate

VP of Robotics for Infios

The future of warehouse labor

It’s clear that robotics and automation are paving the way for warehouses to address labor shortages and other challenges. But it’s also clear that the people element is maintained too. It could be through voice that extra hidden value is found.

This is a shift in the roles of humans in the supply chain, rather than a replacement, with the roles fulfilled by people ultimately made easier and more effective with VDW.

CONCLUSION

The combined solution benefits the people in your care the most, as they will universally experience safer, easier and more fulfilling work. It could permanently address your labor shortage issues in this way, meaning your entire workforce could soon be the faithful and loyal core team you trust to keep your supply chain moving.

Could Infios's versatile VDW and robotics solutions be right the right fix for your labor challenges?

Find out more

Learn more about our voice solutions:

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Learn more about our AMR solutions:

[READ MORE](#)