

CASE STUDY

Driving warehouse productivity

ISN: How autonomous mobile robotics (AMRs) are helping automotive parts and accessories distributor to rapidly scale their business



Snapshot

Company

Integrated Supply Network

Industry

Automotive parts and accessories distributor

Number of Employees

655

Warehouse Size

1m sq. ft.

Infios Competency

Robotics

Solution(s)

Autonomous Mobile Robots

Since its founding in 1985, Integrated Supply Network (ISN) has become the nation's largest independent automotive tool and equipment distributor serving resellers and professional DIYers throughout North America and the United Kingdom. ISN is committed to product and distribution excellence by delivering breadth of product and making the unexpected ... expected.



“We would not be able to keep up with volume, without the addition of the robots.”

Theron Neese

Chief Supply Chain Officer,
Integrated Supply Network

Complexity

Support a rapidly growing eCommerce business while overcoming issues related to the availability of skilled warehouse associates.

Best practice

Optimize warehouse fulfillment by increasing associate productivity and retention.

266%

increase in
productivity

106

days for
implementation

110

UPH
achieved

Changing demand

Integrated Supply Network has been growing at an exceptionally fast rate. With the growth of the business came the need to expand the size of its distribution centers too. In recent years, the typical ISN distribution center has seen a 10x increase in size; to over 1M square feet. The growth of these distribution centers has, in-part, been responsible for decreased associate productivity. Since time and money were being wasted on long travel times in aisles, instead of valuable product picking. Furthermore, ISN's fulfillment model was evolving. A surge in small package shipments—which increased from 50% of all orders pre-pandemic to 80% now—placed further strain on associate productivity and distribution center throughput. The productivity of existing warehouse associates was not the only challenge. Finding new associates and retaining them was also problematic for ISN. Skilled warehouse associates have always been in short supply and with the COVID-19 pandemic—and the resulting boom in eCommerce fueling increased competition within the talent pool and higher than expected staff turnover—their availability was even more limited.

Finding the right solution

Integrated Supply Network needed a solution that would allow them to significantly increase associate productivity, maintain the “pick and ship same day” philosophy and mitigate the risk of staff turnover. They were looking for a partner with technical competence to support them along with a commitment to quick deployment. Having worked with Infios's WMS successfully over the past ten years, ISN turned to Infios and its autonomous mobile robot (AMR) partner, Locus Robotics, to drive continued improvements throughout the warehouse. The combined AMR solution would allow the company to rapidly improve travel time in the warehouse, and achieve more efficient throughput. The solution targeted **three customer locations** with **49 Locus bots deployed for the picking process**.

Accelerating transformation

Infios worked collaboratively with Locus to integrate and deploy the bots in just under 4 months. In the new process, a scanned order prompts the robot to move through the warehouse, taking the fastest path to the closest picking location—all without operator intervention. Here, a picker uses information from the robot's screen, including an image of the item to be picked, to find and pick the item required. The picker then scans and drops the item into the appropriate tote, leaving the robot to continue to the next pick location. When all picks are completed, the robot goes to the packing area, where orders are offloaded, before being instructed with the next picking command.

The bots have been an overwhelming success; increasing efficiency, improving accuracy, enhancing the associate experience and driving cost savings. Those cost savings are being re-invested into the workforce to improve employee satisfaction and raise associate wages. This in turn has helped to improve staff retention.

ISN has realized a number of key benefits since deploying their AMRs:

- **266% improvement to picking speeds:** 110 units are picked per hour, compared to the previous rate of 30
- **Fast integration and deployment:** 4 months to go live and value realization
- **Increased picking quality and accuracy,** while reducing associate training time
- **Increased associate wages:** The cost savings from integrating the bots, allows ISN to reinvest in their workforce
- **Stabilized workforce:** AMRs are augmenting the work of associates not replacing them

Next steps

Integrated Supply Network is already experiencing the early successes of AMR. Following a successful phase one, ISN will launch AMR in two more sites in the near future. Additionally, the organization will expand AMR usage to the putaway process, helping to drive further efficiency in their warehouse operation.