

Transforming trailer operations with autonomous robots

Overview

Metro Supply Chain is dedicated to delivering intelligent and agile logistics solutions that enable customers to scale, adapt, and succeed. This commitment drives us to continuously refine our operations and reimagine the movement of goods, with a particular focus on automation in high-impact areas.

The opportunity for enhancement

To further strengthen warehouse operations, Metro Supply Chain evaluated advanced solutions to optimize trailer loading and unloading. Our objective was to identify a capability that would:

- Increase throughput and improve operational reliability
- Deliver meaningful gains with minimal infrastructure changes
- Scale effectively across multiple facilities
- Enhance safety and flexibility for our team members

The solution: autonomous forklift technology

Metro Supply Chain partnered with Gideon to implement a fleet of Trey robots. These AI and vision-powered autonomous forklifts are designed specifically for trailer loading and unloading. Trey's AI-driven pallet recognition and position estimation enable reliable pallet pickup, even in dynamic, cluttered environments. This ensures consistent performance across varied operational conditions.

Dynamic staging

Metro Supply Chain collaborated with Gideon to introduce dynamic staging, a game-changing capability that allows operations to continue even when full truckloads can't be staged due to space constraints. This innovation has been particularly valuable in high-density warehouse environments.





Why it works

- **Fast deployment:** Installed in under a day with no costly modifications to trailers or warehouses
- **Versatility:** Supports over 70 types of standard and non-standard pallets, racks, and containers
- **Seamless integration:** Operates stand-alone or integrates with warehouse management systems (WMS) via API
- **Enhanced safety:** Autonomous systems reduce human risk
- **Operational flexibility:** Adaptable to changing warehouse layouts and pallet types

The results

Introducing this technology has resulted in faster, safer and more reliable trailer operations

24 single-stacked pallets loaded and unloaded per hour

12 hrs of consistent performance on one charge increases productivity

Reduced MHE maintenance costs associated with wear and tear

Safer workflow due to LiDAR and camera systems

Conclusion

Metro Supply Chain's adoption of autonomous robot technology is one of the many ways we're using strategic automation to unlock new levels of performance and resilience for our clients. Through innovation, collaboration and a commitment to operational excellence, we continue to lead the way in modernizing supply chain logistics.

