# Autonomous Delivery Tugs

A ROBOTIC INVENTORY HANDLING SOLUTION POWERED BY BrainOS®



## **Autonomous Delivery Tug Application**

Autonomous delivery tugs, powered by BrainOS®, enhance efficiency and productivity by enabling autonomous delivery of stock carts and loose-pack inventory for any indoor point-to-point delivery needs. It's ideal for retailers using nearly any type of cart-based stock or material handling and delivery methods. Autonomous delivery tugs provide retailers with an easy entry into autonomy without the need for expensive facility retrofitting or to increase management and operational complexity.

Well-suited to highly dynamic retail environments with open workflows and frequent layout changes, robotic delivery tugs are easily operated by non-technical employees and allows for highly configurable routing options that can be quickly adjusted or updated as store layouts change. Singular or multiple routes can be trained, stored, reconfigured, or deleted at any time. Autonomous delivery tugs allow for total flexibility so retailers can leverage the delivery routes that best align with their changing needs.

Autonomous mobile robots (AMRs) are becoming valuable tools in addressing labor-intensive tasks and extending staff capacity. With a lower cost of entry compared to infrastructure-heavy automated guided vehicles (AGVs), BrainOS-powered AMRs are fast and easy to deploy. As they navigate autonomously to avoid shoppers, obstacles, and staff members, they also work seamlessly alongside other machines like forklifts and other robots.

### **Autonomous Delivery Tug**



# LEVERAGES EXISTING EQUIPMENT/TECHNOLOGY

- Capable of towing a variety of common stock and utility cart types.
- Uses same cloud-connected operating system and user interface as other BrainOSpowered robots. Allows for remote performance monitoring and diagnostics, and consistent software updates that add new capabilities throughout the life of the machine.



### BOOSTS OVERALL STAFF/ STORE PRODUCTIVITY

- Eliminates inefficient back and forth stock and material runs, enabling staff to focus on higher value activities.
- Enables multiple stops throughout a store with single or multiple routes



### IMPROVES STORE AND STAFF SAFETY

- Safety-first architecture and certification enables fully autonomous operation in open to public commercial and retail spaces. Brain Corp leads the industry for proven safe operation in dynamic environments.
- Reduces workers' compensation claims by decreasing back-breaking tasks.



# FLOOR CARE Soft Floors Hard Floors



# Powered by BrainOS®

Brain Corp's commercial operating system is currently used in robots at major retail facilities, airports, and malls around the world.

Brain Corp partners with leading OEMs to produce, deploy, and support commercial robots at scale with its robotic AI platform.

The flexibility of the Brain Corp platform enables OEMs to solve a range of challenges and provide facilities with choices: from moving materials and inventory to automating floor cleaning and vacuuming, to inventory-scanning solutions.

By selecting robots powered by BrainOS, facilities of all types can leverage purpose-built, best-in-class machines across their environments without increasing management and operational complexity, creating data silos, or requiring end-users to learn different systems.

GG

The winners in the retail sector will be those who understand the implications of automation and act quickly to respond to them.

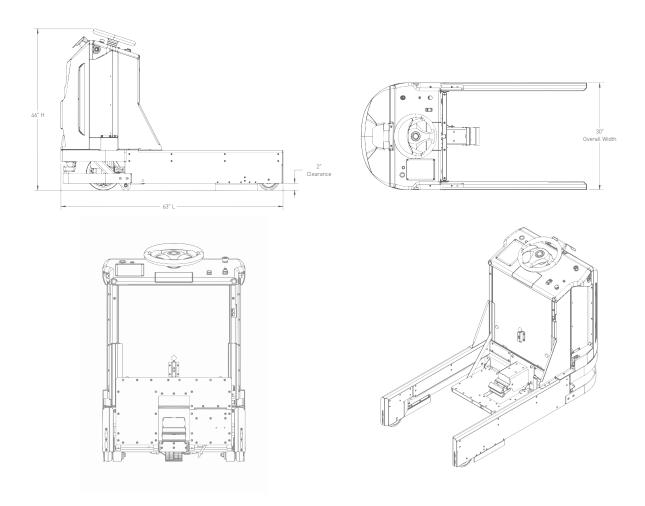
55

MCKINSEY GLOBAL INSTITUTE,
JULY 2019

# **Machine Specifications**

Autonomous delivery tugs eliminate inefficient back-and-forth inventory and material handling, and works seamlessly alongside teammates while safely navigating complex, dynamic environments. Capable of towing a variety of common stock and utility cart types, carts are loaded by pushing them into the payload area until they click into and engage with the tow hitch.

### ACCOMMODATES CARTS UP TO 40" LONG AND UP TO 25" WIDE



Brain Corp's BrainOS powers the largest fleets of indoor autonomous mobile robots in the world, including solutions for floor scrubbers, commercial vacuums, material delivery, and more.

