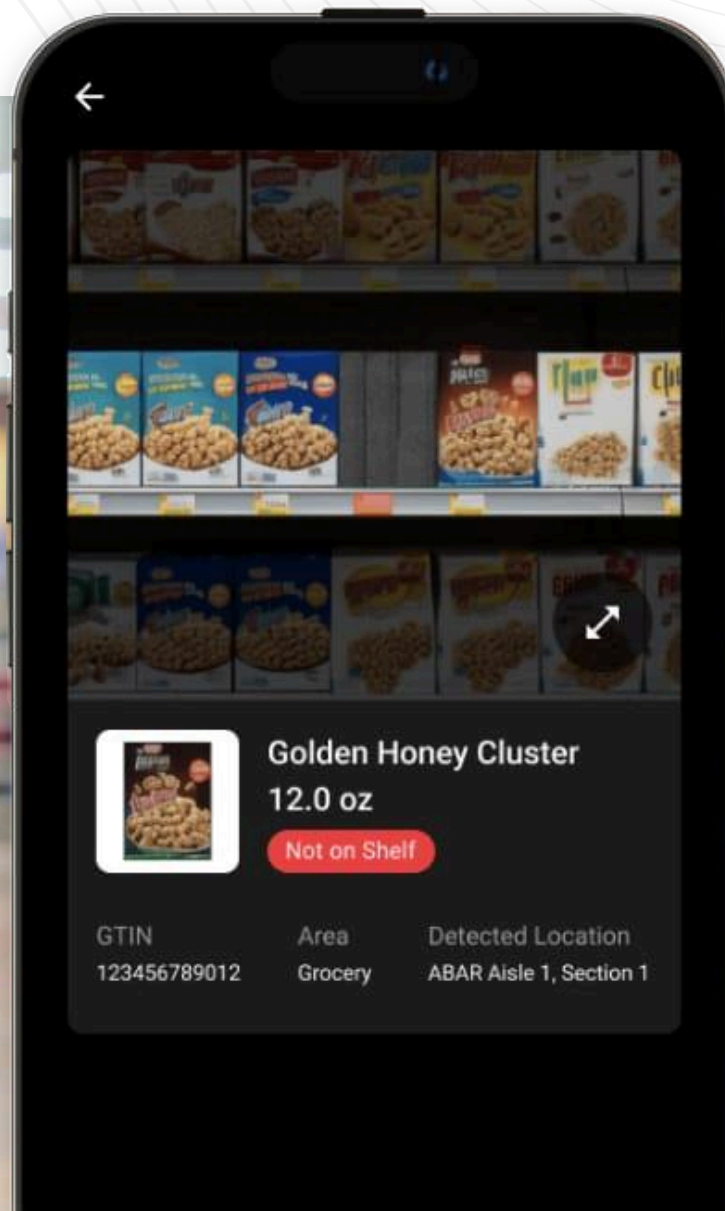


# BrainOS<sup>®</sup> Sense Suite Deployment

From unboxing to insights



Welcome to the BrainOS® Sense Suite Deployment! This guide will walk you through Brain Corp's process for deploying our autonomous inventory management solution into your operations. From the moment the Dane AIR™ arrives, to the ongoing support after deployment, we'll cover every step of the way.



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# Mapping your environment

Setting up your store for the Dane AIR™ inventory scanning robot is a two-day process. The key tasks include unboxing, configuring the LiDAR system for mapping, establishing the Home Marker, and capturing navigation and shelf images. Let's explore these steps in more detail.

## Unboxing and Home Marker

The arrival of your Dane AIR™ inventory scanning robot marks the start of a transformative journey for your store. Our on-site deployment team manages the setup, starting with unboxing the robot. Together with your store manager, we identify the best location for the Home Marker, which acts as the robot's home base and charging station.

➤ The Home Marker is important because it's where the robot starts and ends its scanning routes.

## Initial mapping

Once unboxed, our team works with your store manager to walk through the store, and create an action plan. The robot is then manually guided through each aisle to create a detailed 3D map using LiDAR technology, which creates a base sitemap for future navigation creation of the final scanning routes.



We will also use this time to train managers how to interpret the initial sitemap generated by the robot's LiDAR system. Black areas on the map represent open spaces where the robot can freely navigate, while light gray areas indicate shelving, obstacles, or other LiDAR-detected structures. This bird's-eye view of your store captures everything—from hardline shelving to apparel tables—ensuring that both the robot and your team have a complete understanding of the store layout. Once the raw 3D map data is collected, it's uploaded to our proprietary US-based cloud deployment software, where our Customer Operations team reviews the map and adds annotations to match your store's labeling system.

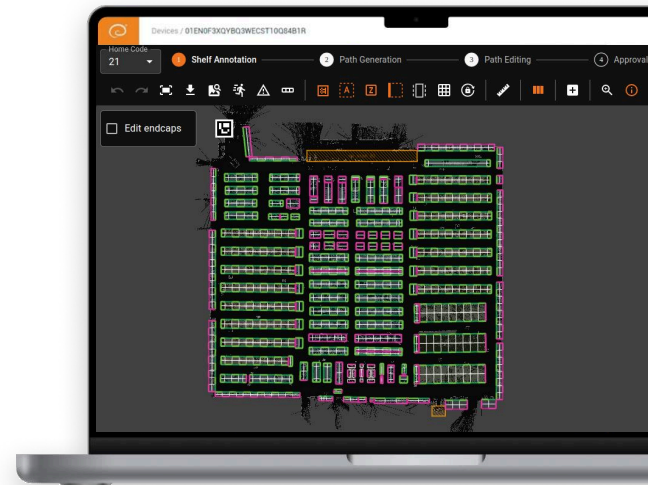
### HOW THE ROBOT OPERATES

The robot combines cameras, LiDAR sensors, and, if applicable, RFID antennas to capture your store's inventory. The LiDAR continuously scans the environment to detect obstacles and safely navigate. If an obstruction is detected, the robot will either reroute or pause, and send an alert to staff via the BrainOS® Mobile app. The front camera captures images for supplemental autonomous navigation such as detecting escalators, while the side cameras focus on detailed scanning of the shelves.



# Annotation phase

Annotations do more than just label scannable areas—they also define how the robot should scan shelves and products throughout your store. Annotations enable the robot to avoid "no-scan" zones, which it recognizes as obstacles and navigates around using its autonomous global replanning ability. This ensures the robot navigates efficiently while skipping non-relevant areas.



- Annotations are crucial because they allow our team to customize the robot's behavior to suit your store's unique layout, optimizing scanning distances and determining whether reserve steel shelves should be scanned. These tailored settings ensure that the robot delivers accurate, store-specific results.

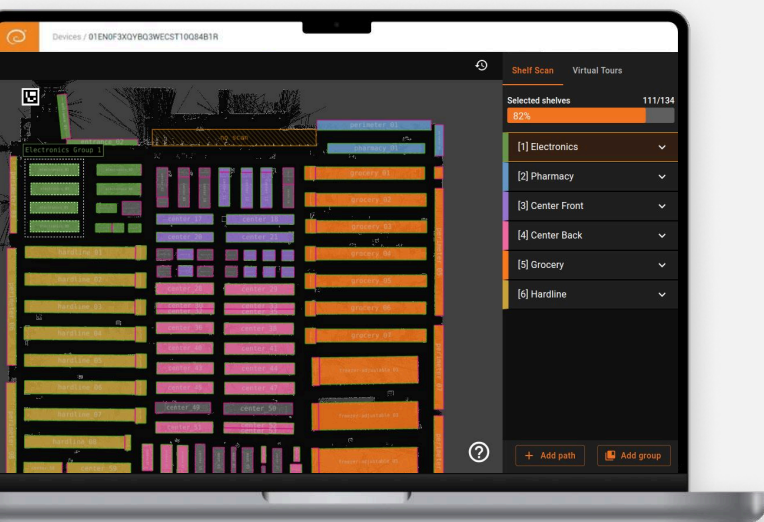
## Binning: Sectioning your shelves

Binning divides shelves into smaller, clearly defined sections, allowing the robot to precisely track product locations. Each bin represents a specific area of a shelf, such as the space between two steel racks. Our software creates a comprehensive sitemap that provides a landscape view of your store, ensuring that binning is aligned with your store's layout. This alignment simplifies the process of locating products, identifying out-of-stock items, and correcting misplaced products. Our team manually configures the bins for precision and continues to refine the data, ensuring the robot delivers real-time, actionable inventory insights that facilitate more efficient stock management.



# Initial route creation

After the 3D map and annotations are processed in the cloud, Day 2 of your deployment starts. Scanning routes are reflected on the robot, so the robot knows exactly where to go, where not to go, and what to scan.

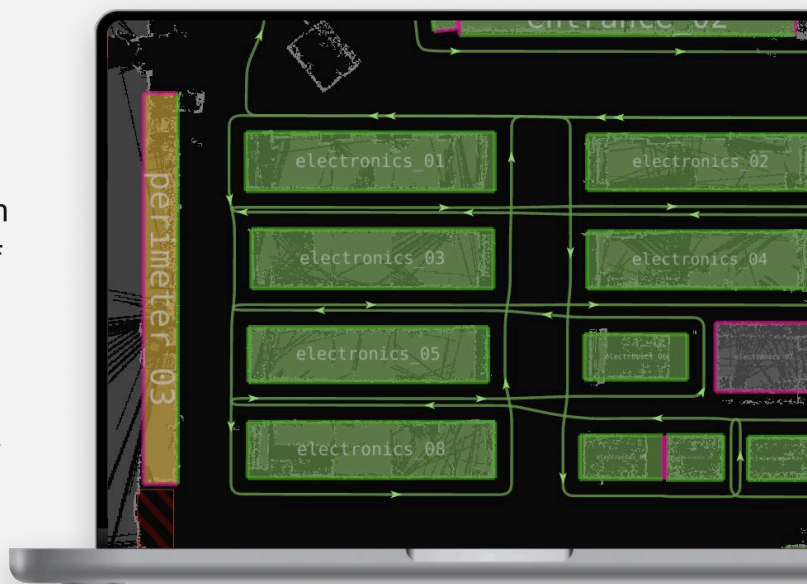


## Scan route generation

To begin route generation, the robot leverages the scan route created with the 3D map and annotations. Once the initial routes are generated, our team reviews and groups them into distinct sections with their own individual routes, ensuring complete coverage while minimizing overlap.

## Route editing

After the scan routes are grouped, our team then can edit the routes to configure optimal distance to shelf for the robot. This enables the team to enhance navigation and performance by considering factors such as ideal scanning distances, streamlined travel paths, and obstacles that may not have been initially accounted for.



# Map refinement and route testing

## Sitemap refinement

On Day 2, the team reviews and refines the sitemap based on the data gathered during the initial route runs. This step ensures the store's layout is captured accurately, and any areas that require adjustment—such as scanning distances, narrow aisles, lighting conditions, or sections with frequent human activity—are fine-tuned.

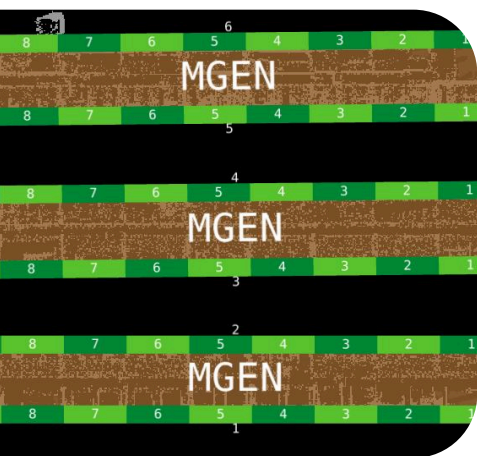
## Route testing and autonomous adjustments

The robot will now begin testing runs on the scanning routes created on Day 1. Our Customer Operations team monitors the robot in real-time, making necessary adjustments to ensure the robot navigates efficiently and scans all the correct areas. The robot's sensors constantly gather information about its surroundings to avoid obstacles like shopping carts or customers, adjusting its path as needed. Through its global re-planning autonomy, the robot is able to dynamically reroute its path to avoid obstacles in real-time, while maintaining optimal scanning capabilities.





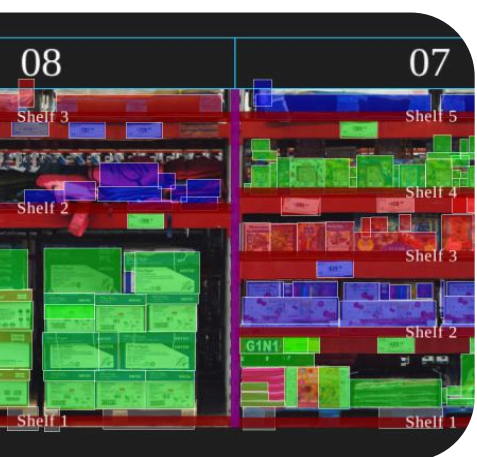
# Optimization with BrainOS<sup>®</sup> additional features



## Customizing to your store labeling system

Implementing custom aliasing to match your store's unique labeling system translates our default labels into your specific designation.

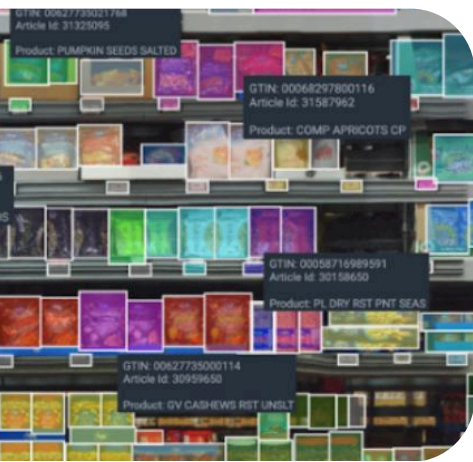
➤ This ensures that all data and insights generated by the robot are immediately recognizable and actionable for your operators.



## Shelf delineation

After the initial binning process, we can proceed with a refinement phase where we enhance the map by adding layers of data for greater accuracy. In this phase, we introduce shelf delineation, which differentiates products by shelf levels and defines specific product areas. This creates a panoramic view of your shelves, referred to as a Realogram. The robot then uses computer vision to compare the scanned data with the store catalog, accurately detecting discrepancies, and pinpointing their exact locations.

➤ This step makes it easier to organize products on different shelf levels and clearly define specific product areas. This helps the robot quickly spot low stock, empty shelves, and other inventory issues.



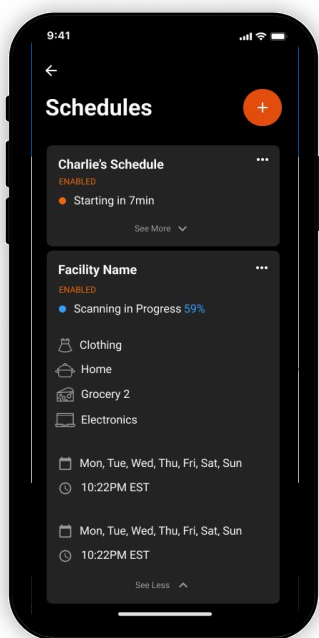
## Priority insights

Priority insights or delineation involves setting up specific shelf areas for the robot to focus on, prioritizing high-value sections that have the most impact on your store's operations. By identifying these key routes, operators can focus on the insights that matter most.

- This focus helps to ensure that the most critical inventory areas are scanned regularly, ultimately increasing the robot's return on investment (ROI) by streamlining inventory management where it matters most.



# Actioning insights and fleet management

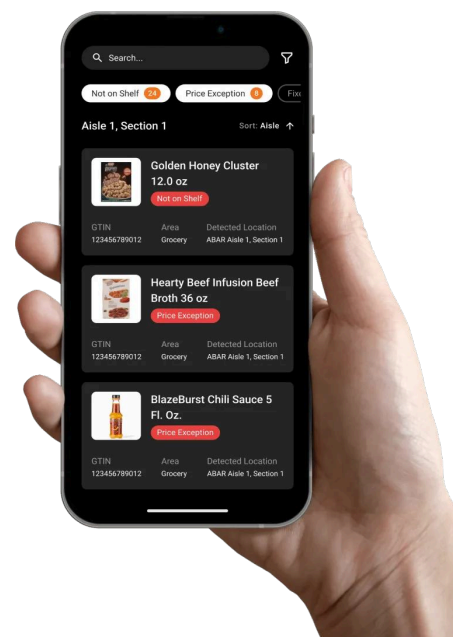


## Creating automated scanning schedules

Automated scanning schedule within the BrainOS® Mobile app ensures the robot operates autonomously at optimal times for your store. Training will include how to edit, enable, or disable scheduled scanning routes, allowing for flexibility based on your store's needs.

## Insight generation begins

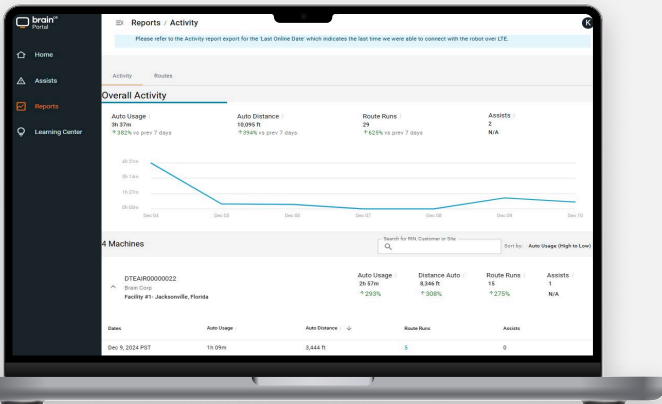
Your team will receive detailed insights into your store, including product locations, pricing, and out-of-stock items. This information helps your team make informed decisions and take action. Our deep learning models continuously improve key functions such as product recognition, price tag detection, out-of-stock identification, inventory location mapping, and planogram compliance, allowing the robot to adapt to new challenges and enhance its effectiveness over time.



# Ongoing monitoring and support

Our commitment extends beyond deployment. Our Operations Team continuously monitors the robot's performance, making adjustments as needed to keep up with store changes and ensuring data accuracy. We also provide dedicated, US-based customer support and ongoing review of insights to maintain store environment changes and sitemap maintenance year round.

With BrainCorp's AI-powered inventory analytics and autonomous inventory scanning robots, managers gain clearer operational visibility that boosts sales, loyalty, and productivity. The BrainOS® Ops Management Tools equip managers with essential controls and reports for scheduling operations and reviewing insights, helping to manage automated operations at all levels—driving transparency and efficiency.

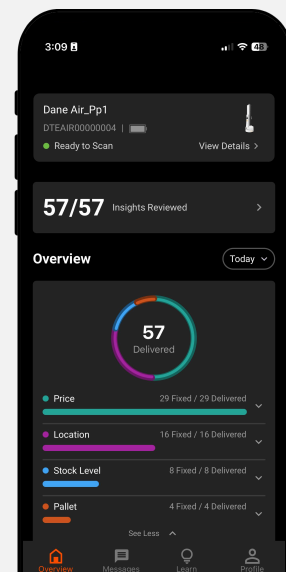


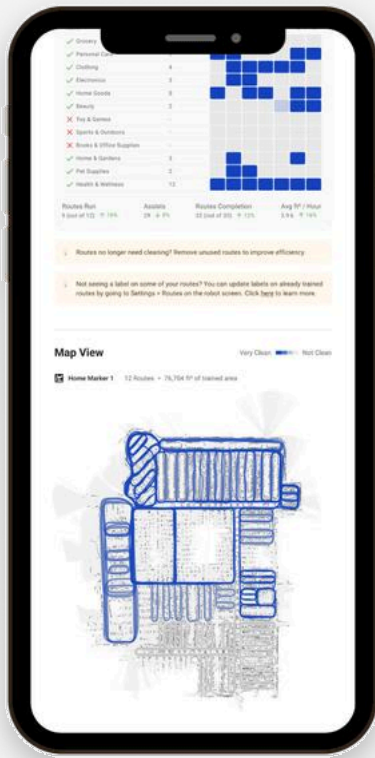
## The BrainOS® portal: Cloud-based intel, optimization, and monitoring

The BrainOS® Portal provides a centralized, cloud-based platform to monitor and optimize your autonomous fleet. It generates actionable insights that guide data-driven decision-making around strategic initiatives, enhancing your store's overall performance.

## The BrainOS® app: Insights on the go

With the BrainOS® App, you're always connected to your store, enabling rapid responses to emerging issues and opportunities. This mobile application is designed for quick data viewing, allowing managers and staff to receive real-time alerts for exceptions, get an overview of daily scan results, and dive deep into inventory levels, price tag discrepancies, and product placement data.





## The BrainOS® Email Reports: Automated, actionable summaries delivered to your inbox

Our system automatically generates and delivers insightful daily reports covering autonomous robot usage, operational performance metrics, heat maps, and more. Weekly summary reports provide managers with an aerial view of the fleet's activities, ensuring that you stay informed.

The Dane AIR™ deployment process goes beyond simply installing a robot in your store—it's about creating a tailored, efficient, and insightful shelf-scanning solution that grows and adapts with your business. Our combination of advanced technology and customer success measures guarantees you receive accurate, actionable data from day one, with the flexibility to meet your changing needs over time.

