Move More Inventory & Move it Smarter with

Ranger™ IL Intralogistics Robots

Complex fulfillment **challenges…**

Intralogistics – the movement of the right materials at the right time to the right place – is one of the biggest fulfillment challenges that warehouse operators face. Conventional warehouses are full of hazards. Human-operated machines like forklifts can damage inventory and cause serious injury. In short, manual fulfillment processes are costly, inefficient and risky. Not to mention that in today's tight labor market, hiring and retaining material handlers presents a major hurdle to success.

… meet your
GreyOrange Ranger IL solution

Introducing the Ranger IL-L high-payload autonomous mobile robot (AMR) and the Ranger IL-H autonomous forklift. The material handling AMR duo is designed to crush the most complex fulfillment challenges by:

1-4 weeks install to **go-live**

6-18 month ROI for two shift operations

50-60% reduction in cost for long-haul operation

Reduce **dock-to-stock** and **pick-to-dispatch** cycle times by up to **60%**

- **Moving payloads to boost fulfillment throughput**

- **Deploying quickly to deliver value without new infrastructure or warehouse layout changes**

- **Providing a safe and efficient alternative to manned forklifts, AGVs and pallet conveyors**

Payload **handling versatility**

RIL - L
Transports inventory payloads up to
2204 lbs (1,000 kg)

RIL - H
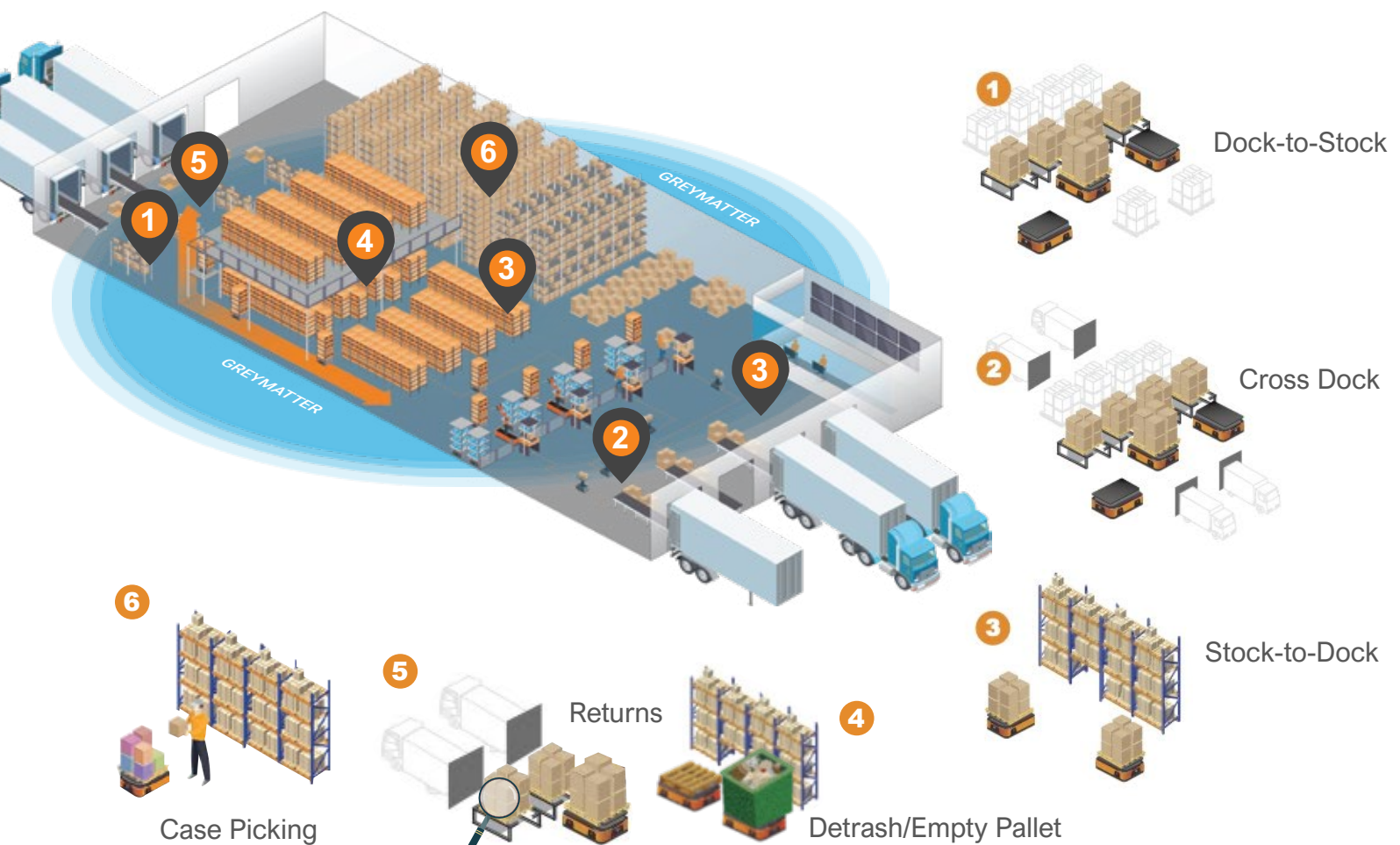Transports inventory payloads up to
3080 lbs (1,400 kg)

Ranger™ IL, **Powered by GreyMatter™**

GreyMatter, the GreyOrange fulfillment orchestration platform, gives Ranger IL 360° operational warehouse awareness. Ranger IL orchestrates intralogistics processes in sync with the flow of the floor – and keeps pace with demand. The activities of Ranger IL robots are integrated into GreyMatter's machine learning capabilities to constantly enhance its bots' operational performance. The platform lets the robots make real-time decisions to optimize material movement to the correct locations all across the warehouse. The result is higher overall throughput for the warehouse and optimized labor both for material movement and replenishment.

With GreyMatter automating multiple applications, warehouse managers and operators gain full visibility of inventory in motion. You get real-time update priorities for missions and monitor intralogistics throughout the facility. The platform enables cross-application assignment, forecasting and syncing deliveries with triggered events, reducing time spent waiting for replenishment or reducing dock to stock cycle times. From the GreyMatter control center, live maps and system alerts enable teams to easily maintain healthy operations.

Ranger IL and GreyMatter can be integrated with a WMS or ERP to systematically run operations or run your fleet independently using the GoMove app.

1 Dock-to-Stock

2 Cross Dock

3 Stock-to-Dock

6 Case Picking

5 Returns

4 Detrash/Empty Pallet

Applications

Dock-to-stock and replenishment

Replace long-haul forklift moves between inbound dock, deep-storage and forward-pick areas. Drop points located in the racking allow the bots to easily handoff or takeaway pallets with put/pick operators.

Case pick to pallet

Increase your case picking throughput by zoning operators and picking directly to pallets on RIL bots in brownfield warehouses. RIL bots utilize a swarm strategy, with GreyMatter optimizing pick routes and orchestrating orders to increase operator and bot efficiency.
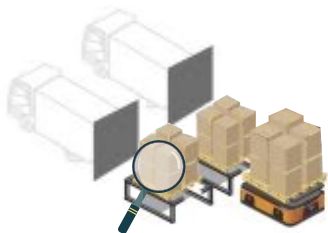
Cross-docking

Replace forklift-based cross-docking operations with accurate automated movement. Augment overloaded conveyor-based systems to avoid further costs from investments in fixed infrastructure. Operating flexible AMRs in a cross-dock means reduced transshipment times, decreased reliance on labor, and no need for fixed infrastructure.

Detrash and empty-pallet flows

Set and forget trash and empty pallet return flows utilizing AMRs to keep your facility uncluttered and organized per 5S.

Returns management

Handle large-item returns, sorting payloads from the returns dock to the correct returns management area, freeing operators to focus on more valuable movement tasks.

Before deploying Ranger IL	After deploying Ranger IL
Labor costs increasing at 7% year on year	Long haul labor cost reduced 50%+
Operator turnover rates exceeding 40%	24/7 operational stability
FG product shrinkage and rack damage	Benefitted from safety-rated 2D & 3D LiDAR sensors and always-learning GreyMatter, minimizing accidents and maximizing fulfillment efficiency
No visibility on key intralogistics measurements	Real-time visibility of inventory

Customer **Story**

🎯 Challenge

A South American home improvement retailer in Chile faced multiple challenges in the operations of its material-handling facility. The company processed around 4,000 pallet a day from its 1.3M sqft fulfillment center. The facility had 54 human-operated forklifts that created a risk of accidents and damaged inventory. Hiring and retaining workers was a major challenge.

🧠 Solution

The company implemented Ranger IL along with GreyMatter fulfillment orchestration platform. The platform choreographed a fleet of 75 Ranger IL's that replaced all of the customer's material handling needs for 14 flows. Software-directed business flows now control dock-to-stock, cross-docking, integration with goods-to-person picking, case replenishment, and pallet -pick outbound flows.

🔄 Impact

The Ranger IL fleet has brought increased safety, with no human injury due to operations over two years and enabled the company to stabilize its operations to provide consistent and uninterrupted throughput, even during unforeseen complications such as COVID-19.

Watch **Ranger IL** in action

Book an on-site demo to see the Ranger IL bots operate – using **your product in your environment.** A demo can be conducted at any site in the U.S. within three weeks after the request is made. Or join us for a warehouse visit in a city near you to see firsthand how GreyMatter empowers associates and drives productivity.

Get in touch

Ranger IL robots deliver for customers

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GreyOrange helped us develop ways of increasing the efficiency and productivity of the whole supply chain. When you see these robots-these Rangers-moving around and orienting themselves, it's amazing. GreyMatter software is flexible enough to accomplish not only everything we asked for in terms of productivity, efficiency and intelligence, but it also integrated smoothly with our existing platforms"

- Mariano Imberga,
Head of Operations, Sodimac

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