



GreyOrange

Leading Global Retail Chain Accelerates Customer Deliveries with Multi-Robot Orchestration



The Challenges: **Bring next-day shipping to 97% of Canadian households**

In recent years, one of the largest superstore retailers in the world has been laser-focused on improving ecommerce fulfillment capabilities to meet increasing demand. As part of this initiative, the company opened a 400K+ square foot, high-tech fulfillment center – the first of its kind in Western Canada – that could handle high volumes while enabling same- to next-day delivery.

To effectively manage an expanding product range, they needed the storage capacity to support a large assortment of SKUs. The retailer recognized that modular and scalable automation was the key to meeting the challenges of their complex warehouse operations while lowering variable cost per unit. Therefore, they decided to power the new fulfillment center with proven robotics technology that could seamlessly integrate with their standard warehouse layout, offer flexibility and adaptability for future growth, and be deployed within a year.

About Customer

This leading global retail chain operates a vast network of over 400 stores nationwide, serving 1.5 million customers daily. Employing over 100,000 associates, the chain stands as one of the country's largest employers and consistently ranks among the top 10 most influential brands.

Geography: Canada

GO Solutions: 162 Goods-to-Person; 30 Sortation & Smart Conveying; 29 Person-to-Goods Cobots powered by GreyMatter™, 5,500 MSU, and 17 PPS

Fulfillment Specs:

- ▶ Warehouse size: 430,000 sq ft
- ▶ Number of shifts: 1
- ▶ Working hours in a shift: 10
- ▶ Go live: 11 months
- ▶ First high-tech fulfillment center in Western Canada

GreyOrange Projected Impact:

- ▶ Increase in average units processed/ day (inbound and outbound, 2022-2026): 300%
- ▶ 2-day delivery to 97% of customers nationally
- ▶ 2-3x productivity increase
- ▶ 60% reduction in variable cost per unit
- ▶ Optimized storage of 150K SKUs for faster fulfillment



The Solution:

Multiagent orchestration for more efficient fulfillment and faster customer deliveries

This omnichannel retail leader felt that GreyOrange was aligned with the company's culture, dynamic warehouse requirements, and strategic goals and decided to work together to make their automation vision a reality. They deployed 220+ Autonomous Mobile Robots (AMRs), including goods-to-person (GTP) robots, cobots and mobile sorters, in the new warehouse. The deployment automated forward area picking, point-to-point movement, conveying, and sorting in a flexible and agile way through GreyMatter, GreyOrange's multiagent orchestration software platform.

The solution seamlessly integrates fulfillment software, smart mobile robots and people to continuously model and execute optimal real-time workflows, actions and priorities. Inventory movement is now faster and more efficient in a fully integrated, end-to-end solution, supporting the fulfillment of 10 million orders per year.

▶ **Forward-area picking and fulfillment with GTP solution:**

Individual items are delivered to warehouse workers, increasing efficiency and reducing picking and packing time. With the ability to seamlessly adapt to changing inventory profiles, demand patterns and peak periods, the GTP solution operates with unprecedented real-time optimization, executes orders "before time" to set new benchmarks for fulfillment efficiency, and ensures that every order is picked and packed with precision and speed.

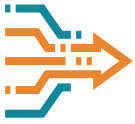
- ▶ **Point-to-point movement for post-pick automation:** The assisted picking cobot solution moves both small and large "to be packed" orders to the respective packing machines, such as the Continuously Variable Packing (CVP) or autobagger systems. Once packed, all items are moved to sortation stations in roll cages, totes or gaylords.

The GreyOrange cobots were operational with minimal infrastructure changes and operator training, delivering immediate productivity gains from day one. With GreyMatter real-time inventory synchronization, rule-based picking and dynamic load balancing, operations in the new warehouse are efficient, safe, and optimized to meet and exceed customer demands.

- ▶ **Packed-order sortation:** Ranger MoveSmart (RMS) bots sort packages and inventory from manual packers, auto-carton packing and autobaggers for efficient, fast and accurate routing and fulfillment. Powered by GreyMatter, the sortation bots adapt seamlessly to changing demand patterns and provide flexible throughput, capacity utilization and on-the-go destination scaling. Unlike fixed sortation solutions, RMS bots eliminate significant upfront investments, while ensuring immediate value in terms of time, cost and accuracy.



Projected achievements include granting 97% of the company's customer base 2-day delivery, diminished labor reliance, a 2-3x productivity increase, a 60% variable cost decrease, optimized 500K SKU storage in 430k sq. ft., 30-min readiness for pickup, and regular updates for continued productivity gains.



Up next:

A vertical lift for more efficient order preparation and consolidation

GreyOrange is also planning to implement a vertical mezzanine lift at the fulfillment center. It will enable roll cages loaded with inventory to be efficiently transported to the mezzanine level using a vertical lift, further optimizing the utilization of vertical space within the fulfillment center. Additionally, the introduction of vertical movement will allow mobile storage units (MSUs) to seamlessly travel across floors using the vertical lift.

This enhancement will boost order preparation and consolidation process efficiency to support the retailer's commitment to top-tier customer service.



The Impact:

Faster, more accurate customer deliveries, better space utilization, and the potential to save millions

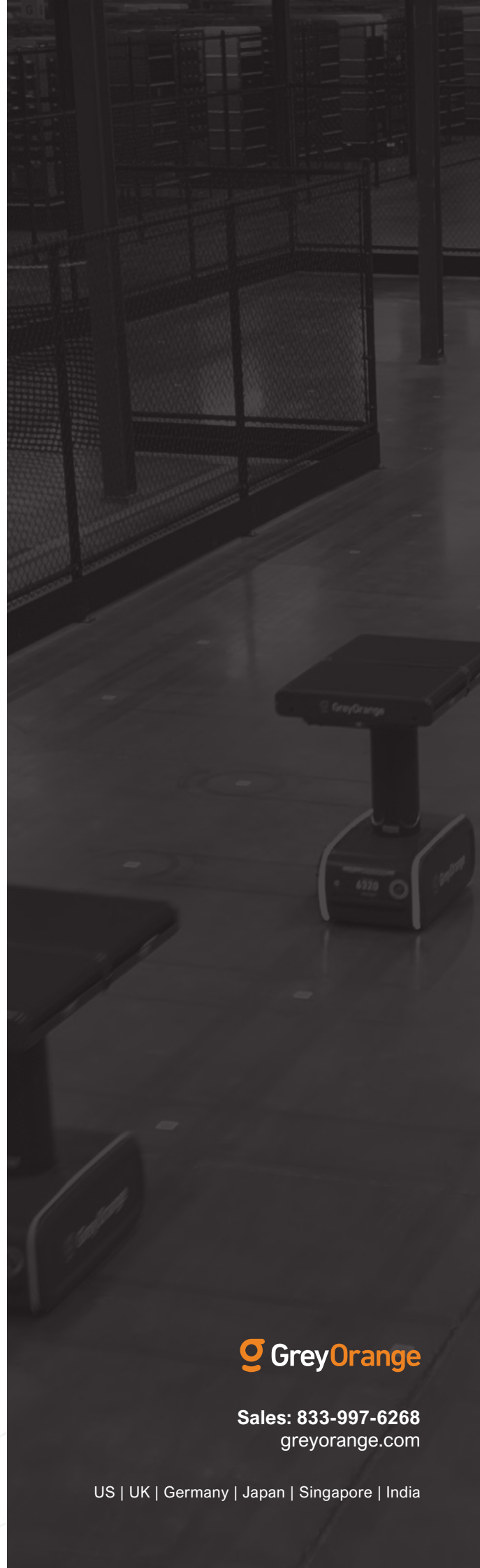
GreyOrange's intelligent warehousing transformation has empowered the retail giant to provide same- and next-day delivery to customers across the country, significantly enhancing operational efficiency and fulfillment capabilities.

Over time, they anticipate achieving the following goals:

- ▶▶ Next- or two-day delivery to 97% of customers nationally
- ▶▶ Reduced labor dependency for peak and non-peak shifts
- ▶▶ Streamlined, automated picking, packing and sorting processes, enabling:
 - 2-3x productivity increase
 - 60% reduction in variable cost per unit
- ▶▶ Optimized storage of 500K+ SKUs within 430,000 square feet for:
 - Efficient inventory management with a 21-day supply on hand
 - Faster fulfillment, with orders ready for pick up in 30 minutes or less
- ▶▶ Continuous productivity improvements due to automated monthly software upgrades

In addition to the significant efficiency, productivity and fulfillment benefits, GreyOrange automation solutions have improved the work environment within the fulfillment center, resulting in:

- ▶▶ Fewer manual, repetitive tasks
- ▶▶ An ergonomically improved workplace, yielding a reduction in worker fatigue and dissatisfaction
- ▶▶ 99% or better inventory accuracy
- ▶▶ Reduction in theft and product/facility damage



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