

Berkshire Grey Robotic Sortation as an Alternative to Traditional Unit Sorters

As warehouse operations grow increasingly complex, the demand for efficient, scalable, and space-saving automation solutions becomes paramount.



**BERKSHIRE
GREY**

This eBook explores how Berkshire Grey's robotic sortation technology serves as a **cutting-edge alternative** to traditional unit sorters (*tilt tray, bombay, cross belt*) — seamlessly integrating into your existing warehouse environment and occupying a fraction of the space while increasing efficiency and throughput.

TARGETED USE CASES

Store and Wholesale Replenishment

Ideal for high-demand, efficient, high-throughput environments.



Push

Outbound item sortation for store replenishment, not driven by store demand. Items are allocated and pushed to stores. *Typically discount and overstock retailers.*



Pull

Outbound item sortation driven by specific store demand. Higher variability among stores and orders expected. Order timing and accuracy is critical. *Typically retailers with a brick and mortar presence.*



Wholesale & Distributor

Less-than-order fulfillment for wholesale, distribution and B2B eComm. Sort-to-tote/case flexibility expected. Order timing and accuracy most critical.

eCommerce and Omni-Channel Operations

Best suited for operations with high lines-per-order and significant SKU repetition. Can be either a standalone channel or as part of an omni-channel approach.

Challenges with Traditional Unit Sorters

Traditional unit sorters, once considered state-of-the-art, now present several challenges in modern warehouse environments. These include **substantial space requirements, high labor dependency, and limited flexibility** for growth and for managing diverse product types.

Traditional Unit Sorter

- **Costly** to buy and maintain over time.
- **No automated takeaway** increases labor requirements needed for packing into chutes.
- Large, fixed footprint with **no scalability**.
- **Lower SKU eligibility** and manual exception handling required for rolling, oversized, and small items not suited for tilt trays.
- **Single point of failure** meaning a malfunction can disrupt the entire system, leading to significant operational downtime.

BG Robotic Sortation

- **Lower operating costs**, matching traditional unit sorter throughput with up to 50% less labor in half the physical space.
- **Automated takeaway**, with filled boxes moving to pack out with no human intervention.
- **Scalable by design**, easy to add more systems as needed/as you grow.
- **High efficiency induction**, either fully-automated with robotic induction or highly efficient manual induction (supporting inductions of multis for 2,000+ uph).
- **~100% SKU eligibility** including oversized, rolling, and very small items that traditionally require manual exception handling.
- **Industrial grade** with distributed reliability.
- **Supports direct-to-store containers** for optimized efficiency.

GAIN THE EQUIVALENT THROUGHPUT CAPACITY OF A UNIT SORTER WITH...



No Single Point of Failure

BG systems operate independently of one another.



~50% Less Labor Required

Current staff made more productive; systems offer robotic induction where labor scarcity is a concern.



~50% Less Space Required

versus a traditional unit sorter.

Advantages of Berkshire Grey's Robotic Sortation

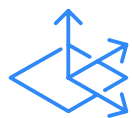
Robotic sortation systems deliver **transformative benefits** over traditional unit sorters.



Labor and Space Efficiency: Reduces labor needs by up to 50% and operates in half the physical space compared to conventional sorters, making it ideal for environments where space and labor are at a premium.



Leverage More Automation: Fully automated takeaway and elimination of manual exception handling for small, rolling or oversized SKUs boost operational efficiency.



Scalability and Flexibility: Modular systems capable of handling hundreds to thousands of orders simultaneously, these systems demonstrate exceptional adaptability to your varying operational demands, and are easily expanded over time.



Technological Superiority: Features like no single point of failure, and the ability to handle diverse item sizes and types, mark significant advancements over traditional systems.



Seamless Integration: The systems integrate smoothly into existing operations with minimal disruption.

Get the same capacity in half the space with half the labor.



COMPETITIVE ADVANTAGES

Robust and Reliable Design: With industrial-grade components and a distributed reliability design, the system ensures continuous operation even if parts become inoperable.

Direct Handling and No Singulation: Direct picking from vendor cases and no singulation requirement reduce the number of touches per order, enhancing picking rates.

Proven Experience: The Berkshire Grey Robotic Sortation solution is our top-selling product, boasting over a decade of production picks in some of the world's most challenging warehouses.

Major Features and Improvements of RSPS/RPS Gen 4

Our latest generation of our **top-selling sortation solution**, with **over a decade's worth of production picks**, offers retailers a host of new features and functionality aimed at increasing their speed of fulfillment and lowering their operational costs.



Increased SKU Eligibility

Now handles a wider range of product sizes, achieving near 100% SKU eligibility for greater flexibility in item sorting.



Enhanced Performance Rates

Increased shuttle rate by 10% and reduced box lift time by 33%, enabling faster and more efficient operations.



Increased Box Fullness

Capable of overfilling outbound containers by up to 10%, optimizing space and reducing transportation costs.



Software Enhancements

Advanced orchestration to dynamically assign product flow to stores, efficient management of large order waves, and the ability to address many additional open orders at once.

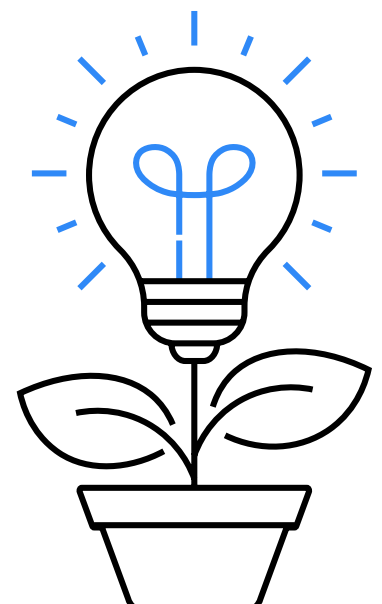
INVESTING IN AUTOMATION: GOOD FOR YOUR BOTTOM LINE

Reduce Labor Costs: With automation handling tasks like auto-takeaway, cut labor requirements by 50% and enhance retained employee satisfaction.

Minimize Manual Processes: Handling nearly 100% of SKUs reduces the need for manual processes, allowing for greater automation utility.

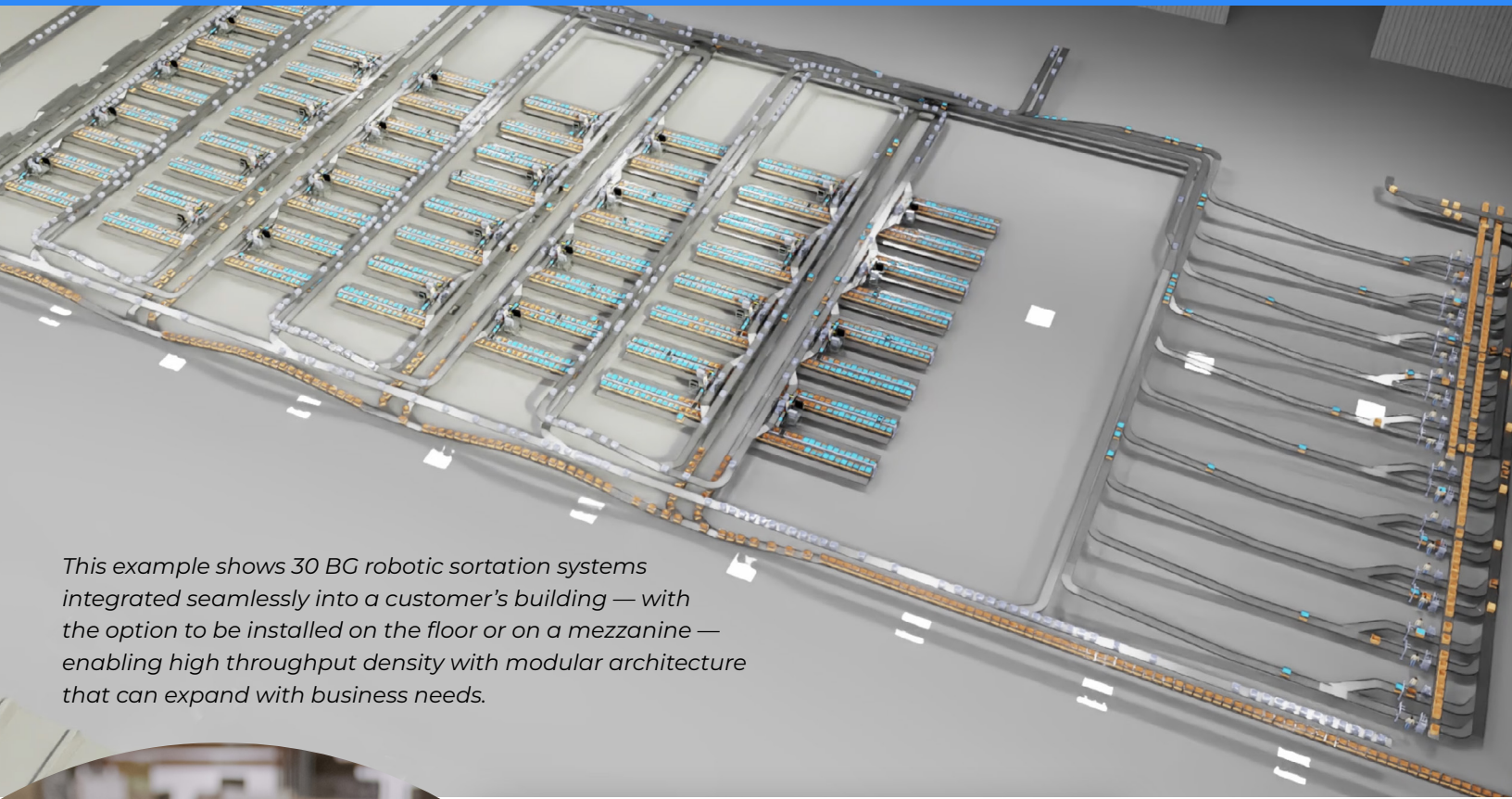
Accelerate Fulfillment: Multi-item induction capabilities increase operational speed.

Lower Shipping Costs: Exceptional container utilization reduces shipping and transportation costs by minimizing the volume of shipped air.



Robotic Sortation to Support Large-Scale Distribution

Fully-integrated system (brownfield and mezzanine-ready) with **sophisticated software** that drives the entire operation — order management (including optimization and virtualization), routing of totes, buffer and operator management, etc.



This example shows 30 BG robotic sortation systems integrated seamlessly into a customer's building — with the option to be installed on the floor or on a mezzanine — enabling high throughput density with modular architecture that can expand with business needs.



SYSTEM HIGHLIGHTS

High Throughput

- ~4x increase in throughput per square foot compared to traditional solutions
- Expandable over time, servicing thousands of stores from one system

Optimized Labor Needs

- Manual induction rates 2,000 uph+
- Robotic induction available for fully lights-out processing
- Automated takeaway for completed orders

De-Risking Your Project with a Custom Simulation

Implementing an advanced robotic sortation system to replace traditional unit sorters involves significant investment. Berkshire Grey mitigates these risks through tailored simulation services that let businesses **visualize and quantify benefits** for their specific use case before committing.



Tailored Simulations for Proven Results

Our simulations provide a clear visualization of how our solutions will function in your specific environment, optimizing your operational needs and showcasing potential efficiency gains.

SEE THE IMPACT, DON'T JUST IMAGINE IT

High-fidelity simulations allow stakeholders to see potential operational improvements — demonstrating how our systems will integrate seamlessly into your current operations.



De-risked investment

Know exactly how your operations will be transformed before you spend.



Validate Payback and Reduce Risk

Labor requirements for ROI, impacts and requirements on upstream and downstream processes, utilization, and much more.



Backed by analytics

From sizing and throughput improvements to cost savings and ROI, we'll show you the hard data.



Tailored for proven results

Every aspect of the automation solution is optimized for your needs.

[Watch this video to learn more about BG simulation »](#)

Partner with Confidence

Our simulation tools and analytics pave the way for a lower-risk transition to advanced automation, maximizing your return on investment. Choosing Berkshire Grey means partnering with a leader in warehouse automation who **prioritizes your operational success.**



Future Outlook

Looking ahead, robotic sortation is poised to play an increasingly vital role in warehouse automation, with Berkshire Grey at the forefront of this transformation. The technology you select for your warehouse needs to be **fast, accurate, scalable, and reliable.**