

Encore Repair Services

White Paper

Sustainable Reverse Logistics

How Retailers Can Reduce Costs, Strengthen Environmental Impact, and Maximize Value Through an Optimized Returns Ecosystem

Prepared for:

National Retail Association Annual Trade Show

Prepared by:

Encore Repair Services

Date:

December 2025



WHITE PAPER

Sustainable Reverse Logistics: How Retailers Can Reduce Costs, Strengthen Environmental Impact, and Maximize Value Through an Optimized Returns Ecosystem

By Encore Repair Services

Executive Summary

Retailers are facing unprecedented pressure to reduce operating costs, improve sustainability performance, while maintaining customer satisfaction in a climate where product returns continue to rise. The U.S. retail industry saw more than \$743 billion in returns last year representing nearly 15% of total retail sales. Returns are expensive, carbon-intensive, labor-intensive, and highly complex, but they also represent one of the greatest untapped opportunities for value recovery and environmental progress.

Encore Repair Services helps retailers unlock that opportunity. By approaching reverse logistics as a strategic asset, not an afterthought or loss, Encore enables retailers to simultaneously reduce return-related costs, extend product lifecycles, decrease landfill waste, and improve overall sustainability metrics, all while recovering more value at every stage of the returns process.

This white paper outlines the increasing challenges in retail returns, the environmental and economic costs associated, and the proven strategies retailers can implement to build a smarter, greener, and more profitable reverse-logistics ecosystem.

The Rising Cost and Environmental Impact of Retail Returns

Returns are no longer a small operational burden—they are a defining factor in retail profitability and brand sustainability.

Financial Implications

 Returns erode margins through handling, transportation, reprocessing, and potential liquidation.



- Many retailers still lack visibility into true costs—leading to missed recovery opportunities.
- On average, a returned product costs retailers roughly two-thirds of its original price once transportation, labor, inspection, and disposition are accounted for.

Environmental Implications

- More than 9.5 billion pounds of returned goods end up in landfills each year.
- Reverse-logistics transportation generates significant greenhouse gas emissions.
- Products that could be repaired or refurbished are often prematurely discarded due to inefficient workflows.

Retailers cannot solve these challenges with traditional models. The industry must move toward a circular, sustainability-driven approach—one that Encore Repair Services enables through advanced repair, refurbishment, value recovery, and process optimization.

Building a Sustainable, High-Value Reverse Logistics Strategy

A modern returns ecosystem requires alignment between **operational efficiency** and **environmental responsibility**. Encore supports retailers by implementing strategies centered on three pillars:

1. Extending Product Lifecycles Through Professional Repair & Refurbishment

Repair and refurbishment remain the most direct and impactful methods for keeping products in circulation and out of landfills. Encore's expert diagnostics, component-level repair capabilities, and comprehensive refurbishing workflows help:

- Recover maximum value from returned devices and consumer electronics
- Reduce carbon emissions by avoiding unnecessary manufacturing of replacement units
- Support retailer sustainability reporting through measurable waste-reduction data
- Improve customer satisfaction by enabling more returns to be resold as "like-new"



Keeping products in the lifecycle longer positively impacts both margins and ESG goals.

2. Smart Disposition: Choosing the Highest-Value and Lowest-Impact Path

Most retailers still manually route returns—and often choose the fastest short-term option rather than the highest long-term value.

Encore enables a more strategic approach through disposition that prioritizes:

- Repair first whenever feasible
- Refurbish second for maximum resale value
- Harvest usable components to reduce parts waste
- Recycle responsibly when necessary

This structured hierarchy significantly reduces waste while strengthening bottom-line returns.

3. Operational Optimization for Sustainability and Profitability

Returns processing is often slowed by:

- Fragmented workflows
- Inconsistent quality checks
- Manual processes
- Limited real-time visibility
- Lack of standardized sustainability reporting

Encore brings discipline, data, and structure to the process.

By optimizing workflows, retailers can achieve:

- Faster processing cycles
- Lower labor and transportation costs
- Better grading accuracy



- Higher recovery rates
- · Reduced carbon impact per unit

This is where operational excellence becomes a sustainability tool—not just a financial one.

The Retail Advantage of Partnering With Encore Repair Services

Encore provides retailers with a reverse-logistics advantage through a combination of **technical expertise**, **quality-driven processes**, and **sustainability-centered value recovery**.

Our capabilities strengthen three core retail goals:

1. Cost Reduction

- Lower repair/processing costs through efficient diagnostics
- Reduced transportation and handling
- Higher resale value for repaired/refurbished items
- Fewer units destined for liquidation or disposal

2. Increased Sustainability

- Reduced landfill contribution
- Lower emissions through lifecycle extension
- Responsible recycling practices
- Detailed sustainability reporting and transparency

3. Maximized Value Recovery

- Greater percentage of returns converted to resale
- Higher grading quality leads to better resale tiers



Enhanced supply availability through refurbished inventory

Retailers gain financial benefits while advancing corporate sustainability goals—without compromise.

Why Sustainable Reverse Logistics Is Now a Retail Imperative

Returns are not going away. Consumer expectations for convenience, fast shipping, and flexible policies will continue to drive volume. What *can* change is how retailers manage them.

Today's leading retailers are shifting from reactive returns management to **strategic circular-economy practices**—not only to protect margins but to align with ESG standards, supplier requirements, and public sustainability commitments.

Encore Repair Services is at the forefront of this shift, helping retailers transform the returns problem into a value-generating competitive advantage.

Conclusion: A Smarter, Greener, More Profitable Path Forward

The future of retail belongs to organizations that can balance financial performance with environmental stewardship. Reverse logistics represents one of the most powerful levers retailers have to achieve both.

By prioritizing:

- Product lifecycle extension
- Smart, sustainable disposition
- Operational excellence
- Value recovery at every step

Retailers can drive lower operational costs, reduced environmental impact, and stronger brand trust.

Encore Repair Services stands ready to lead retailers into this future—delivering the expertise, infrastructure, and partnership needed to build a reverse-logistics ecosystem that is **profitable**, **sustainable**, **and operationally strong**.



References

National Retail Federation & Appriss Retail. 2023 Consumer Returns in the Retail Industry. https://cdn.nrf.com/sites/default/files/2024-01/Customer_Returns_Report_2023_Final.pdf

NRF Consumer Returns Rate Data (Online vs Brick-and-Mortar). https://nrf.com/research/2023-consumer-returns-retail-industry

Optoro / Forbes environmental impact of returns (8.4–9.5B pounds waste; CO_2 impact). https://www.forbes.com/councils/forbesbusinesscouncil/2025/09/30/the-890-billion-blind-spot-how-retailers-can-support-more-sustainable-returns/

Supply & Demand Chain Executive – Environmental Cost of Retail Returns. https://www.sdcexec.com/warehousing/retail/article/21577206/gotrg-environmental-cost-of-retail-returns

CBRE Reverse Logistics Waste & Landfill Impact Report. https://www.cbre.com/insights/briefs/reverse-logistics-revs-up-as-2023-holiday-sales-rise

NRF Circular Retail & Future of Reverse Logistics. https://nrf.com/blog/going-circular-future-retail-returns-and-reverse-logistics