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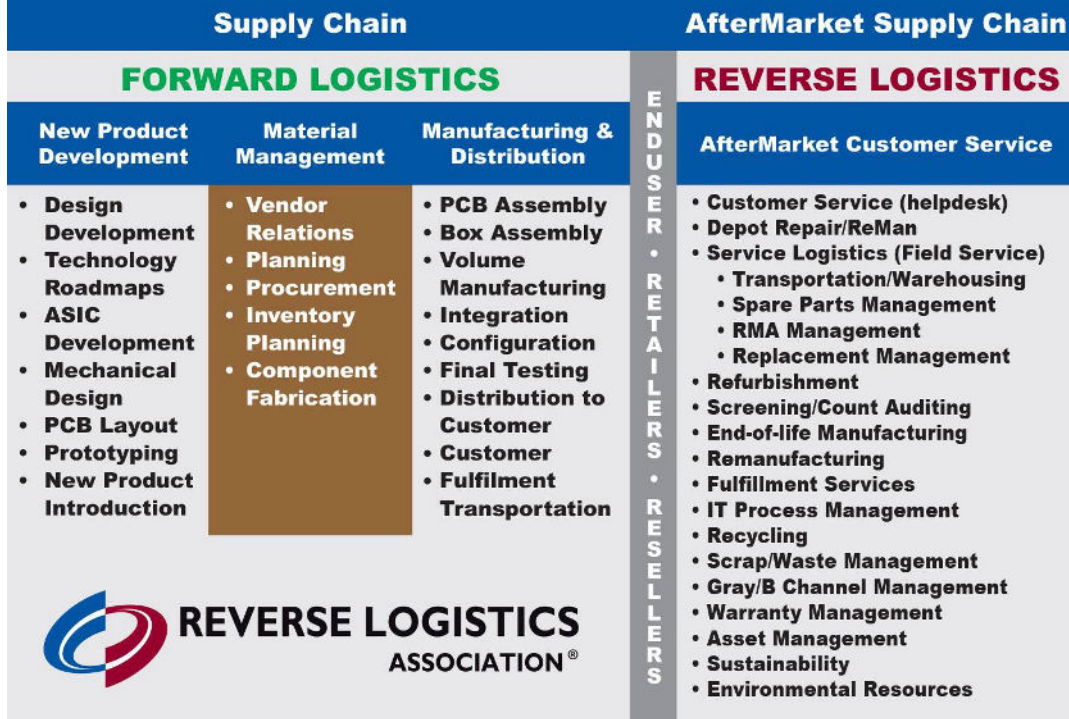
REVERSE LOGISTICS



WHITE PAPER

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PRODUCT LIFE CYCLE



WHAT IS REVERSE LOGISTICS?

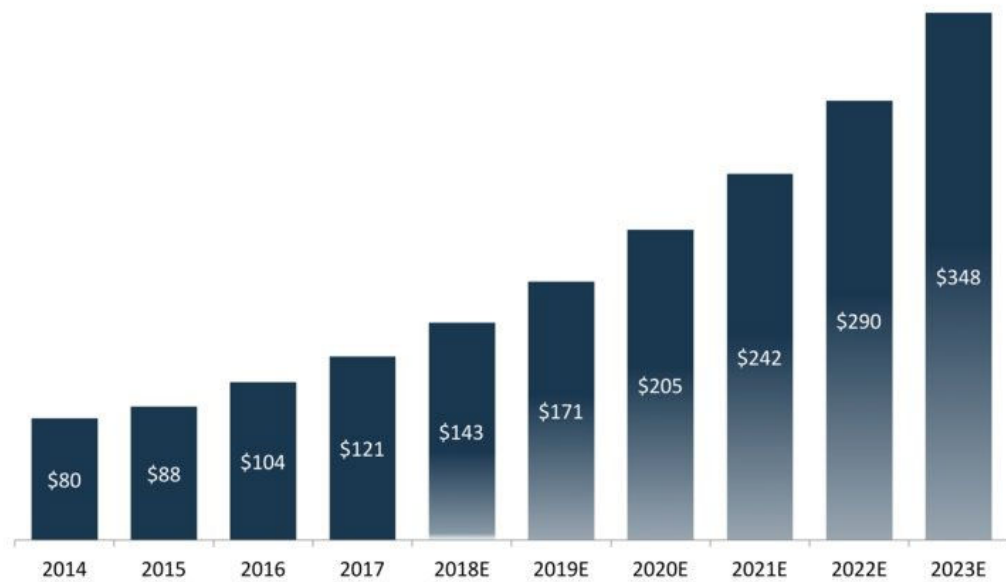
Reverse logistics, also known as return logistics or reverse supply chain, is the process of moving products from their point of intended consumption back to their point of origin--either for disposal or recapturing value. The process of reverse logistics is one that many e-commerce businesses have yet to master, as the goal of e-retail and the e-retail supply chain is to send products outwards, not returning them to their point of creation. In the e-retail industry, returns and recalls are an unwanted outcome and an inevitability, so businesses must create plans to accommodate them in the least costly and most efficient way possible.

THE INCREASING COST AND POPULARITY OF CONSUMER RETURNS

When one thinks of logistics in the e-commerce industry, one may think of it as a forward moving process, with an end goal of getting a product to a consumer. However, rising consumer expectations and the rapidly increasing popularity of e-commerce businesses has created the noticeable challenge of moving products backwards. The days of a linear supply chain are over, as there is now a 'second cycle' that arises once the product has been delivered to the consumer. This deviation in a traditional, linear, supply chain is due to increasing return volumes in the e-commerce industry. According to Business Insider, return rates for e-commerce purchases are between 25 percent and 30 percent, compared to just 9 percent for brick-and-mortar purchases. Business Insider also forecasts that e-commerce returns will generate upwards of \$348 billion in cost by 2023.

FORECAST: US E-Commerce Return Volume

Billions (\$)



Source: US Census Bureau, eMarketer, Ecommerce Foundation, Business Insider Intelligence estimates

BUSINESS
INSIDER
INTELLIGENCE

There are multiple factors contributing to the rise of reverse logistics in e-commerce industries, including...

PRODUCT RETURNS BY THE CONSUMER

- Incorrect product or product size ordered
- The consumer no longer needs or wants the product
- The product does not match the consumer's expectations
- The retailer ships the wrong product or product size
- The product received was damaged
- The product received does not work as intended (Malfunctioning)
- The consumer engages in Wardrobing*

*Wardrobing is the process of buying a product, using it, and then quickly returning it.

PRODUCT RETURNS BY CARRIERS

- The consumer provided an incomplete or wrong address
- The consumer is not available to accept the order
- A dispute occurs between the delivery service and consumer (COD orders)
- The product was delivered to the wrong address

A study conducted by Ivesp, a conversion rate optimization company, states that these product returns add an estimated 8 to 10 percent of the cost to the price of the product, and that retailers

should expect to see a dramatic increase in the cost of reverse logistics over the next decade. There are multiple factors that currently contribute to this cost, including...

- The weight and size of the product being delivered
- Base delivery rates (Accounting for country, region, state, etc.)
- Fuel surcharges
- CGST & SGST (Central Goods and Service Tax and State Goods and Service Tax)
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WHY REVERSE LOGISTICS OPTIMIZATION IS IMPORTANT

With the rapidly increasing popularity of online shopping, e-commerce businesses can no longer treat their reverse logistics management as an afterthought. It must now be a core capability within the supply chain, as it can not only reduce costs, but also protect the brand, increase consumer loyalty and revenues, as explained fully below.

#1 - CUSTOMER SATISFACTION AND BRAND REPUTATION

A hidden cost of poor reverse logistics management is the often irreversible damage to the consumer experience. Each time a consumer returns a product, or has a difficult time returning a product, the chance they will buy from that retailer significantly decreases. If this occurs, you lose the lifetime value of that consumer, and will often gain an unfavorable review on social media or Yelp.

According to market research from the Aberdeen Group, consumers believe that the following attributes are of the greatest importance for both reverse and forward logistics management:

- Elimination of lost or slow shipments
- Reduction of inventory carrying costs for customers
- Improved delivery reliability
- Improved efficiency in shipping and receiving operations
- Improved dispute resolution (return and refund management, COD discrepancies, etc.)

With these attributes in mind, it is clear that the days of, 'all sales are final' are no longer applicable to e-retailers. Amit Sharma, CEO of Narvar, states, "An online return is a critical moment in the customer journey. Retailers have an opportunity to impress and delight customers, especially high-value segments like millennials and affluent shoppers. These are digital natives who treat returns as a natural part of the buying process and have come to expect convenience and transparent communication."

Industry leaders in reverse logistics, such as Apple, Hewlett-Packard, and H&M are using the following methods to meet the ever-growing expectations of online shoppers:

- Free or low-cost return processes
- Including trackable return labels in the package
- Providing easily printable return labels on their website
- Allowing consumers to drop off returns at carrier locations
- Providing the option of receiving store credit for their returned purchased

If retailers are able to meet the high expectations of seasoned online shoppers, they can use their reverse logistics processes to not only improve customer satisfaction, but also fuel new revenue streams and inspire loyalty.

#2 - ENVIRONMENTAL IMPACT

The current social climate surrounding environmental impact is quite charged, but many companies across the world are still struggling to find ways to make their supply chains environmentally friendly. However, reverse logistics is an inherently green subset of the modern supply chain that businesses are now utilizing to not only lessen their environmental impact, but also gain favorable public opinion and generate revenues. For instance:

- Apparel giant H&M now designs new clothing lines with recycled materials received from consumer returns. This has significantly decreased their contributions to landfills, while simultaneously decreasing overhead costs associated with purchasing new materials.
- Image Microsystems, a reverse logistics company, partnered with an unnamed office supply retailer to centralize the transportation and resell process of returned products, which has decreased the retailer's carbon footprint, transportation costs, and fuel costs.
- Global telecom supplier Ericsson embraced reverse logistics by designing their products with the return and disposal process in mind. This allowed the company to tweak their designs to reduce product weight, product volume, and the use of restricted substances. This decision has helped Ericsson decrease their raw material footprint by 70 times over in the past ten years, while also decreasing overall production costs.
- Philips Consumer Lifestyle implemented a 'zero landfill goal' after discovering that a majority of their consumer-returned products still functioned well. This goal has allowed them to create processes to refurbish, reuse, and resell upwards of 80 percent of their returned products. Products that are identified as unfit for redistribution are disposed of in environmentally sensitive ways.

#3 - GENERAL COST SAVING

Reverse logistics optimization has the ability to create cost-saving outcomes for companies, even when the processes are not 'green-focused'. Such cost-saving outcomes include cross-company

labor (manufacturing to customer services), transportation and shipping, and warehouse and storage. A number of companies have embraced reverse logistics optimization and have seen considerable return on investment.

- Cisco partnered with a third-party reverse logistics company in 2005 in an effort to revamp their return processes, which effectively transformed the \$8-million cost center into a \$147-million revenue generator by 2009.
- Mobile electronics producer Palm Inc. revamped their returns processes by focusing on refurbishing their products, and now sells them through secondary channels, such as Overstock.com and other online retailers.
- Jeff Robe, of the Reverse Logistics Association, states, “The benefit to reverse logistics is tangible. Most companies are realizing that being green means being more profitable, too.”

HOW CAN TECHNOLOGY HELP?

Technology can help e-commerce businesses increase efficiency in their returns process. Startups are currently leading the reverse logistics technology market by developing solutions that address the returns management process in unique ways. For example:

- An unnamed startup is partnering with retailers and manufactures that are actively looking to resell returned items and excess merchandise. This startup provides companies with custom software that manages and redirects returned products and excess inventory to sites such as Amazon and eBay.
- One startup that operates in the telecommunications industry uses custom reverse logistics technology to manage the returns of defective or damaged tablets, smartphones, and laptops for large companies. This startup then aids in the resell process by selling them through their online channels and offline franchises.

Technology is also able to improve the returns process by generating data. The process of generating data from consumer returns is difficult, and as a result, creates an often missed opportunity for retailers. Multiple startups have devised analytical solutions for retailers to help them understand their return rates, reduce the number of returns, create customer value, and even tackle identity fraud. For instance:

- A technology focused reverse logistics company applies algorithm-based analytics to determine the most efficient and cost effective way for retailers to recoup last sales, and even spur consumers to make new purchases.
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HOW CAN WE HELP?

Our innovative reverse logistics systems offer a comprehensive solution that gives optimal process efficiency within your space and budgetary constraints. Our modular systems can provide you with better inventory management, the ability to sort returned items for inspection, integrate a print and apply label for re-labeling of the product, and dimension, weigh and scan for reshipping or restocking back in inventory.

Our systems seamlessly communicate directly to your host system to transmit crucial package data, which is vital for warehouse and inventory operations. We offer a suite of Flexible Automation Solution Tools (FAST™) that deliver the latest in configurable, complete solutions for package handling. This software allows vital data to be shared with your reverse logistics system, as well as many of our other solutions, to ensure optimization of inventory and aid with accuracy.

TO CONCLUDE

For a majority of e-commerce businesses, optimizing reverse logistics and reducing associated costs will require steps to prevent returns, taken in conjunction with efforts to streamline the reverse supply chain. As with most cost reduction initiatives, you will likely have to spend initially in order to save.

Rob O'Byrne of the Logistics Bureau states, "If reverse logistics was easy, every company would excel in its management and execution. Few things worth doing are easy though, so why not at least take a look for the hidden costs in your product-return process? You might find there are some decent savings to be had--enough perhaps, to do more than just look."

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