

Product Returns Avoidance:

Strategies for Reducing Product Returns in the Computer & Consumer Electronics Industry

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The High Cost of Returns

Even before the boom of ecommerce, product returns – and the policies and procedures retailers built around them – were ubiquitous. As ecommerce has continued to shape the retail environment, those policies have become more liberal. Indeed, market participants realize that returns are part of human behavior. An estimated 40% of consumers purchase products with the intention of returning them. The consensus within the retail industry is that the flexibility of product return policies plays a crucial role in consumers' decisions to do business with a particular brand or retail outlet.

In other words, consumers don't just expect retailers to offer flexible return policies; they demand it. And retailers, for their part, are happy to meet this demand in a highly competitive environment where every sale matters.

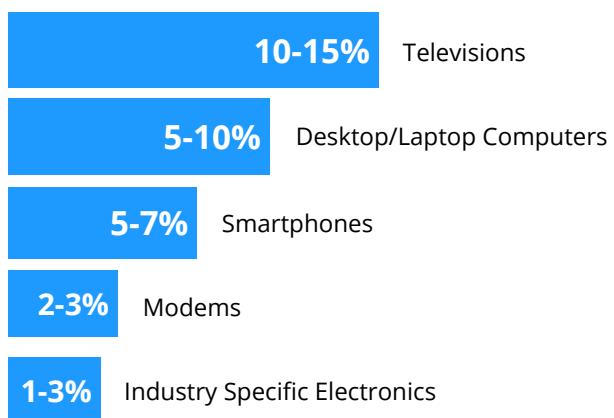
But while honoring returns is essential for building customer loyalty and repeat sales, product returns are a costly proposition for the vast majority of retailers – and one that's often underestimated. According to the National Retail Federation (NRF), consumers returned an estimated \$428 billion in merchandise to retailers in 2020. That represents approximately 10.6% of total U.S. retail sales in 2020. Online returns have more than doubled since 2019 as well, and per the NRF ecommerce continues to be the primary driver behind the growth of returns. On average, consumers return online purchases eight times more frequently than those bought in a store.

Return Rates

Product return rates can vary by industry category (e.g., apparel, jewelry, electronics, etc.), product class within an industry category (e.g., electronics – laptops, TVs, smartphones, etc.), and point of purchase (e.g., online, big-box retailer, department store, specialty store, etc.). Within the computer and consumer electronics sectors, return rates vary significantly based on these criteria.

Our research suggests that the overall return rate for computer and consumer electronics products can range from 3% to 15% of product sales. Highly complex electronic products sold through specialty brick and mortar stores tend to have return rates closer to the lower end of the range; 1% to 3%. This may be because specialty stores typically provide more hands-on support to a more discerning and technically savvy customer base.

Typical Product Return Rates by Category for Computers & Consumer Electronics



Source: Blumberg Advisory Group, Inc. 2021

In contrast, return rates for computers (e.g., laptops, desktops) and printers sold online or through big-box retailers are typically in the range of 5% to 15% of product sales. We found that big-box retailers are experiencing higher return rates than e-commerce or online storefronts hosted by computer manufacturers. These differences are attributable to other factors like the complexity of the equipment purchased, the degree of connectivity between products, and the ability of the sales agent to effectively find a suitable product for the customer.

Expenditures and KPIs

In general, companies spend between 2% to 3% of product sales revenue on managing returns. CNBC reports that the average return cost represents 30% of the purchase price. There are multiple steps in the return process, from return material authorization (RMA) to shipping and receiving, processing, asset recovery, and disposal. Each step in the reverse logistics pipeline adds another cost. As a result, some products are less costly to dispose of in the field than to return.

Unlike Key Performance Indicators (KPIs) associated with other business functions, industry-standard KPI for product returns simply do not exist. This is due to the diversity of products and return sources, frequency of new product releases, and shortness of product sales cycles and lifecycles. Basically, there are too many variables at play to establish a standard performance metric for returns. Instead, reverse logistics professionals attempt to reduce returns as much as possible every year. Achieving a 10% year-over-year reduction in returns is a goal that many professionals strive to attain.

Factors Impacting Return Rates

Factor	Directional Impact on Returns
Purchased from a Specialty Retail Store (Brick & Mortar)	Lower Return Rates
Purchased from Manufacturer's Online Store	Lower Return Rates
Purchased from a Big Box Retailer Brick & Mortar Store	Higher Return Rates
Purchased from an eCommerce Site	Higher Return Rates
Connectivity/Integration with other products or systems	Higher Return Rates
Vendor understanding of customer requirements and specify the correct product	Lower Return Rates

Source: Blumberg Advisory Group, Inc. 2021

Reason for Returns

One of the reasons why return rates are so high is because returns are the easiest way for a retailer to deal with product issues or overstocks. Rather than spending a lot of time with a customer troubleshooting a problem on a new product, it's easier for a retailer to accept the return, issue the buyer a credit or replacement, and send the returned product back to the manufacturer or liquidator.

There are many reasons why a customer may return a product. These reasons range from buyer's remorse to product defects to finding a better price elsewhere.

When it comes to computers and consumer electronics, products are returned for two broad reasons - technical and non-technical issues. While non-technical issues are more difficult to address, we believe that manufacturers and retailers can find ways to minimize or avoid technical returns.

Technical returns can occur for one of the following reasons:

Within the return window:

- Customer frustration with product setup, assembly, and installation
- Product failure or malfunction immediately after product setup (e.g., before return window expires and warranty period begins)
- Product defect/Dead on Arrival

Within the warranty period:

- Product failure or malfunction
- Buyer's Remorse

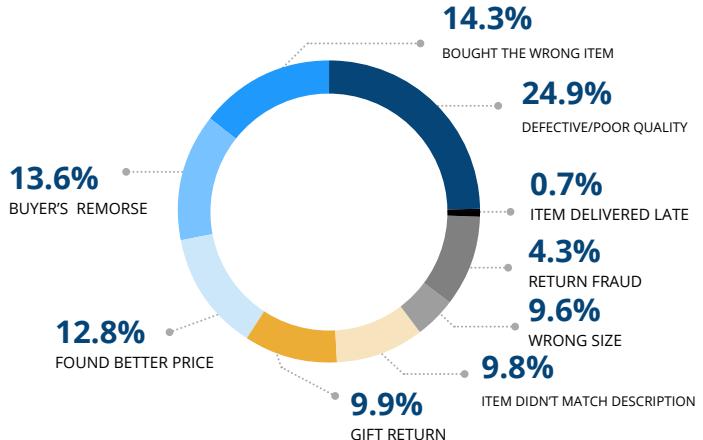
Currently, reverse logistics professionals within most corporations categorize returns due to customer frustration and product malfunction after initial setup as "buyer's remorse" returns. Buyer's remorse can occur simply because the customer changed their mind about owning the product, irrespective of any technical problem. As a result, retailers and manufacturers are not accurately segregating product returns by the reasons for buyer's remorse. In other words, a percentage of buyer's remorse returns are likely due to technical issues that can be resolved, avoiding the return.

The Severity of Technical Returns

We've attempted to evaluate the severity of technical returns for computer and consumer electronics reverse logistics supply chain participants. Customer frustration with the setup process has the most significant impact on product returns. Approximately 1.5% to 2.0% of products get returned for this reason. Managing these returns accounts for about 5% of returns'

Retail Return Rates by Reason

All products (% of Returned Product Sales Value)



Source: Magneto IT Solutions

expenditures. This percentage does not include additional costs associated with providing customer care/telephone support to avoid or resolve an issue remotely.

Dead on Arrival (DOA) claims have a relatively low impact on returns. Products legitimately DOA typically account for only 2% - 3% of returns and approximately 5% of reverse logistics expenditures. On the other hand, managing these returns is a straightforward process.

While only representing a small percentage of overall returns, product failure or malfunction after the initial setup are costly to handle because they require additional processing (i.e., troubleshooting, repair, refurbishment, etc.). On the other hand, products returned due to product failure or malfunctions during the warranty period have a high impact on returns. They typically account for 2-3% of returns and 10% to 20% of costs within the reverse logistics budget. However, 15% of these returns end up as No Fault Found (NFF).

Although these percentages may seem relatively low, they add up, particularly with a high product sales and returns volume. Let's assume a company sells one million mobile devices priced

at \$500 per device, and return rates for various technical reasons during the return window average 5%. That equates to \$25 million in product returns. A company with a \$2 million reverse logistics budget will likely spend close to \$400,000 (20%) processing these returns.

The costs are just as high during the warranty period; a 3% product return rate equates to \$1.8 million in returns and another \$200,000 (10%) in operating costs per year. Any attempts to lower these rates can dramatically improve operating costs and help achieve a year-over-year improvement in return rates.

Performance Metrics Associated with Technical Returns

Reason for Return	Severity/Impact	Return Rate	Cost as a % of Reverse Logistics Budget
Frustration with set-up	High	1.5%-2.0%	5%
DOA	Low	2.0%-3.0%	5%
Failure/malfunction after set-up	Low	<1.0%	10%
Failure/malfunction during the warranty period	High	2.0%-3.0%	10%

Source: Blumberg Advisory Group, Inc. 2021

Key Influencers

Returns can occur at any point during the product lifecycle, from new product introduction to end-of-life disposal. Data and information about a returned product help various functions within an organization plan and forecast service requirements and resources, analyze trends, spot quality issues, improve processes, and build better products.

The most common functions involved in the reverse logistics process include:

- Product Management/Engineering
- R & D
- Customer/Technical Support
- Quality
- Supply Chain
- Field Service
- Quality

Typically, the Supply Chain/Reverse Logistics organization bears the cost of managing returns, whereas the other functions play a different role. The Product Management & Engineering, Quality, and R&D teams utilize return data to design and build better products to reduce or eliminate returns in the future. On the other hand, Customer/Technical Support and Field Service organizations are responsible for processing returns, finding ways to improve these processes, and identifying ways to avoid returns altogether.

Strategies & Tactics to Reduce or Minimize Returns

Over the years, the critical stakeholders in the reverse logistics process have developed various strategies and tactics to minimize, reduce, or avoid product returns. A description of each of these strategies and their impact on lowering product returns is listed below:

- **Restocking Fees:** Retailers have implemented restocking fees as a mechanism to discourage consumers from becoming serial returners. The objective is to impose a financial penalty on consumers who intentionally plan to return a product after purchasing it. An example is a homeowner

who purchases a portable air-conditioner when their central air stops working and returns it once the system is repaired.

- **Enhanced Selling Skills:** Companies have attempted to reduce returns by taking a more thorough approach to understanding customer requirements during the sales process. By being more thorough during the needs analysis phase, companies can offer customers products that meet their specifications. As a result, there is a lower chance of the customer returning the product because it was the wrong fit or didn't meet their needs.
- **Better Instruction Manuals:** Creating better, more explicit instruction manuals is another way to reduce returns due to customer frustration with the setup process. However, a large segment of the population doesn't have the time and patience to read instruction manuals. In addition, there's always the possibility that a consumer will still find the manuals confusing or vague despite the creator's best intentions.
- **Use of Analytics:** Reverse logistics stakeholders can leverage analytics to identify patterns and trends in returns. With this data in hand, reverse logistics professionals can identify the most common reason for returns. R & D and Product Engineering teams can analyze the data to eliminate design flaws and build better, more user-friendly products. While this strategy may result in future improvements, it doesn't stop or reduce returns right now.
- **Digital Onboarding:** Digital onboarding involves using automated, step-by-step instructions to train customers on the setup and use of products. This strategy is often used for mobile devices like smartphones and tablets and effectively introduces end-users to on-device features and operations.

■ **Diagnostics:** Embedded and remote diagnostics can be effective in isolating a fault and determining corrective action. Customer Support personnel often employ the technology during the warranty and post-warranty period if they've ruled out more fundamental causes of a product failure. Also, diagnostics tend to focus on resolving internal issues related to software, firmware, or component failure, which typically require the help of an expert as opposed to resolution by the customer.

■ **Training Videos:** In recent years, many companies have used training videos to onboard and train consumers to set up and operate their products. This strategy helps alleviate some of the challenges that consumers may have with product setup and installation. However, consumers are also frustrated with the need to start, stop, and rewind the video multiple times if they do not catch on immediately.

In summary, the strategies identified above have been effective in reducing returns primarily due to non-technical reasons. Even those that can address technical issues have shortcomings. Reverse logistics stakeholders understand the limitations of each strategy. As a result, they are open to any new approach that can help avoid returns or minimize returns and facilitate a better Customer Experience.

Interactive Returns Management and Avoidance

Computer vision, powered by Video and Augmented Reality, is an emerging technology that companies can deploy to reduce product returns. Visual assistance allows users to instantly stream their mobile device camera or screen for real-time, interactive visual engagement. The technology enables remote agents or experts to see what their customers or technicians see through their smartphone cameras and visually guide them to resolutions. Instead of explaining with words, they can visually show them step-by-step actions, movements, and annotations for their exact device.

Visual assistance powered by Computer Vision AI offers customers instant access to a trained AI system without holding in a phone queue or waiting for a service visit. Imagine talking to a virtual assistant that can see — it could offer customers a much more personalized and interactive experience when it has a firsthand view of the customer's home, product, or an error message. By transforming a self-service channel like web, chat, or online video tutorials into a visual experience, customers can better resolve issues by themselves without the need to contact the company's support center or schedule a technician visit.

Visual assistance has multiple use cases for returns management and reverse logistics:

- **Product Registration:** Visual assistance can quickly scan a product, search for the serial number, open a warranty registration form, automatically capture the product data, and prompt the consumer to enter contact information. Utilizing this technology, the consumer can register the product at any time, even when initiating a service request for the first time. As a result, companies

can automate the registration process, save time, and facilitate faster warranty verification and entitlement. In addition, using visual assistance during the product registration process enables the upsell and cross-sell of consumable auto-replenishment programs and complementary products and accessories.

- **DOA Validation:** Using the technology to take a video or image of a product, a company can quickly and remotely determine if the product has any outward visible signs of a product defect. If an external flaw exists, the application can automatically create an RMA. If the issue is not superficial, the application prompts the customer to speak to a Tech Support agent who can further troubleshoot and diagnose the product until the problem gets resolved or an RMA is issued.

- **Frustration with the Product Setup Process:** A customer can point a smartphone at the product to automatically validate whether the setup has been completed successfully. If the product is not set up properly, the application can walk the consumer through step-by-step instructions on properly setting up the product. Visual assistance provides the consumer with logical, step-by-step instructions and real-time validation on a sequential basis. Customers can complete the product setup and onboarding process at their own pace. More importantly, AI verification features ensure accuracy and completeness of product setup. As a result, visual assistance offers a more user-friendly and intuitive service experience than other product setup and onboarding methods.

- **Product Failure or Malfunction:** Visual assistance can troubleshoot and resolve product failures and malfunctions that occur immediately after the product setup and during the warranty and post-warranty period. After visually confirming that

the product is appropriately set up and connected, the application can prompt the consumer to request additional help through step-by-step, automated troubleshooting or directly from a remote support expert. Using the AR feature-functionality within the application (e.g., annotations, device recognition, knowledge base integration), the remote support expert can guide the consumer to troubleshoot, diagnose, and resolve the issue. If more advanced help is required, the remote expert can issue an RMA or dispatch a field service engineer to provide onsite support.

RMA Facilitation

While companies can implement several strategies identified above to reduce or eliminate returns, there are times when a product, part, or component return is unavoidable. At issue, the returns management process can be very time-consuming for the end-customer and manufacturer/retailer. Without the right processes and appropriate controls, a retailer/manufacturer may incur additional costs through fraudulent returns or issuing unnecessary product replacements or credits.

Visual assistance helps manufacturers and their service providers overcome these challenges and shortcomings. The consumer is directed to a web-based RMA assistant from any support channel by following a step-by-step workflow. The application guides the consumer to capture the product image, scan the serial number to verify the warranty, and scan the bar codes to capture product details. This information automatically populates an online return management authorization (RMA) form, which the consumer can submit with a single click.

With visual assistance, the consumer does not have to wait on the telephone or online for a support agent to obtain information, verify warranty entitlement, and approve the return. In short, this technology enables manufacturers and their authorized service providers to streamline the RMA process, reduce customer effort, eliminate fraud, and reduce costs.

A visual assistance solution is a permission-based application. The consumer must formally request a remote session and authorize remote access. Once the session is complete, the manufacturer or retailer no longer has remote access to the consumer's product or information. This process ensures GDPR compliance is maintained. Furthermore, the provider of help never has access to confidential or personal information about the consumer.

Also, this application is not limited to only visible or external issues with a product or device. A remote support expert can guide the consumer through product troubleshooting even if the problem is internal, such as determining whether the device components are connected or if circuits are damaged. If the fix is complicated, the remote support expert can dispatch a field service engineer or issue an RMA so the consumer can return the product for repair.

Impact of Visual Assistance on KPIs

Key Performance	Improvement Across All Industries	Improvement for Consumer Electronics
Truck Rolls	19%	17%
First Contact Resolution	22%	25%
NPS Increase	25 points	64 points
Average Handling Time	12%	13%
Product Returns	17%	24%

Source: TechSee 2021; Ahead of the KPI Curve: How Visual Assistance Boosts All Customer Service Metrics

Impact of Visual Assistance on KPIs

As part of a limited research study, we described the use cases of visual assistance to reverse logistics professionals that work with retailers, 3rd party service providers, and manufacturers

of computer and consumer electronics products. In general, professionals from companies that deal with a large volume of returns and provide substantial processing/recovery (e.g., repair, refurbishment) of returns had a more favorable view of this technology than professionals from companies that liquidate returned products or experience low product return rates. Those who had a favorable view believed that visual assistance could reduce warranty returns by 15% to 20% and eliminate 20% to 35% of returned products due to customer frustration with the setup process.

[Benchmark research](#) from TechSee, a leading provider of visual assistance tools, shows that remote virtual assistance reduces product returns across all industries by an average of 17% over the first 18 months following deployment. Within the consumer electronics segment specifically, visual assistance can reduce product returns by 18%, on average, within the first six months after deployment and 24% after 18 months. In addition, a global consumer electronics manufacturer was able to reduce product replacements by 54%, which is a considerable saving.

TechSee's research demonstrates that the benefits of visual assistance can extend to other stakeholders in the reverse logistics ecosystem. In addition to eliminating product returns, the application can facilitate improvements in KPIs associated with activities before and after a return (i.e., RMA) is authorized. For example, it can reduce truck rolls (i.e., onsite dispatches), average handling time (AHT), and first contact resolution (FCR). The net impact dramatically reduces costs, saves time, increases productivity & efficiency, and enhances customer satisfaction/net promoter scores (NPS).

Summary

Product returns represent a costly endeavor for manufacturers and retailers. Approximately 10.6% of retail product sales were returned in 2021. Managing product returns costs between 2% to 3% of product sales on average. In addition, the cost of a product return can be as much as 30% of the product sales price. Companies can lose money on returns if the costs of returns are too high. As such, reverse logistics professionals are motivated to reduce returns as much as possible.

Return rates for computers and consumer electronics can vary significantly from 3% to 15%. Factors influencing this variance include the complexity of the product, level of connectivity with other products, the sophistication of buyers, and thoroughness of sales personnel. Product returns within the computer and consumer electronics sector fall into two categories - non-technical and technical returns. Non-technical returns deal with issues like gift returns, the wrong item purchased, or the consumer finding a better price elsewhere. Technical returns deal with customer frustration with the setup process, product defects/DOA, or product failure or malfunction during the warranty period.

Visual assistance powered by AR and Computer Vision is an emerging technology that manufacturers and retailers can deploy across their support organizations to reduce or eliminate product returns due to technical or user issues. [Benchmark research](#) from TechSee, a leading provider of visual assistance technology, indicates that its technology can dramatically reduce product returns and replacements. This technology also reduces KPIs related to other reverse logistics activities such as Average Handling Time, Truck Roll Rates, and First Contact Resolution.

We believe that visual assistance technology represents a highly effective solution for reducing product returns, improving service efficiency, and enhancing CX. Furthermore, it has advantages over other types of return avoidance strategies identified in this whitepaper. We strongly encourage manufacturers and retailers in the computer, consumer electronics, and other sectors to consider deploying visual assistance technology as part of the customer service tool kit and returns avoidance strategy.

About the Author

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