CX: The New Driver For Optimizing Reverse Logistics Operations

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Executive Summary

As organizations look beyond streamlining reverse logistics operations to improve revenue and margins, customer experience has emerged as the primary driver of future gains.

The importance of efficiency across the return, repair, refurbishment, and disposal of new and used products has long been an important area of focus for durable goods manufacturers. However, internal-facing initiatives designed to cut costs and streamline operations are no longer enough.

To thrive in today's marketplace, organizations need to examine how customer-facing activities impact their ability to scale and grow reverse logistics supply chain operations. This whitepaper examines three key drivers of this refocused effort on reverse logistics:

- The Benefits of a Circular Business Economy: Optimizing customer-facing activities within the reverse logistics supply chain helps organizations meet their commitments to the environment and sustainability while improving cycle times and reducing inventory holding levels and turns.
- The Challenges of Existing Infrastructure: Many legacy ERP and supply chain management solutions comprise disparate applications that lack the business logic and process flow required to provide critical feature-functionality, robust reporting, and analytic capabilities.
- How Depot Repair Management Strengthens CX: As a primary service offering during the warranty and extended warranty period, depot repair is a key touchpoint in the customer experience—and an essential target for optimization.

The CX Imperative for Reverse Logistics

Concerns about the environment and sustainability have led organizations of all types to focus on developing Circular Economy business models. The idea that products get returned through the reverse logistics supply chain has been around for some time. Indeed, companies spend billions of dollars every year to support the return, repair, refurbishment, and disposal of new and used products. According to Statista, the global reverse logistics market was valued at $635.6 billion in 2020. By 2028, Statista estimates the reverse logistics market size will exceed $958 billion.

Figure 1
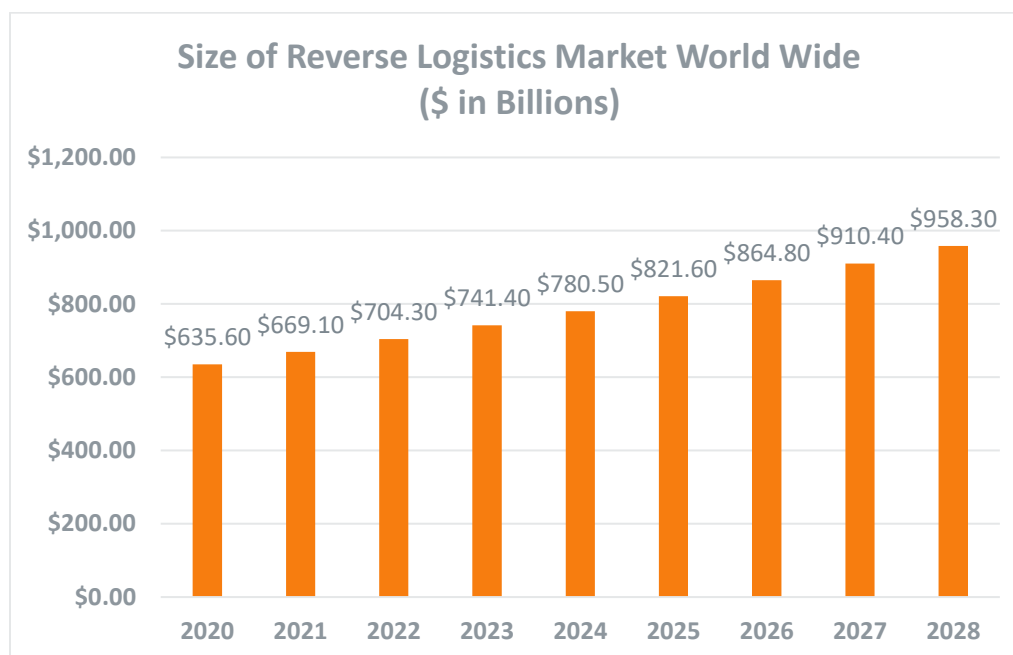
Source: Statista

Historically, participants in the Circular Economy have placed a lot of attention on improving the productivity and efficiency of reverse logistics process flows. With the push toward building Circular Economy business models, companies have begun to expand their focus to improving the customer experience (CX) associated with critical reverse logistics processes. In other words, they've moved beyond looking internally within their organizations to find ways to cut costs and streamline operations. They are now looking externally at how customer-facing activities may impact the ability to scale and grow their reverse logistics supply chain operations.

The opportunity to enhance Reverse Logistics (RL)-CX is significant within the electronics industry in general and the depot repair sector, specifically. Depot Repair is often a primary service offering during the warranty and extended warranty period for mobile devices (i.e., smartphones, laptops, etc.) and portable consumer electronics (e.g., vacuums, televisions, etc.). In addition, depot repair is often how customer-replaceable and field-replaceable units are fixed and placed back into the service supply chain. Reverse logistics supply chain (RLSC) stakeholders ensure higher productivity and faster cycle times by optimizing customer-facing activities, reducing inventory holding levels, and higher inventory turns.

Critical Characteristics of Reverse Logistics Operations

Reverse Logistics in general and depot repair specifically possess unique characteristics that inevitably create challenges from both a CX and operational perspective. These characteristics include:

- Uncertainty of supply & demand: OEMs, channel partners, and authorized service providers usually do not know when a customer will return an item, nor do they know its condition. As a result, it is difficult to plan, predict, or forecast reverse logistic resource (i.e., labor) or parts requirements.

- Customer-specific: the return flow is quite diverse and depends on the product usage patterns of the end-user or customer. This dynamic requires RLSC ecosystem participants to know their customers, how they use their products, and why they return them through the RLSC.

- Timing: assets returned through the RLSC must be processed as quickly as possible due to customer demand, or because they lose their value, or because they create unnecessary waste that is harmful to the environment.

- Value Optimization: a fundamental aspect of RLSCs is their ability to maximize the value of unacceptable assets returned. This outcome can take the form of product repair to extend the life of an asset, remarketing of used or refurbished equipment, or disposal and recycling of electronic waste.

- Flexibility: Given the uncertainty of supply and the potential for high volume returns in any given calendar period, there is a need for RLSC participants to maintain flexible capacity (i.e., facility, processing, and transportation) to achieve goals for returned materials.

- Multiparty coordination: in any aspect of reverse logistics—whether it is repair, refurbishment, recycling, remarketing, or disposal—there are several parties typically involved. As a result, the interaction between these parties must occur as smoothly as possible to avoid bottlenecks and delays.

Unique Reverse Logistics Challenges

As a result of these dynamics, the typical reverse logistics operation experiences six (6) unique and interdependent problems concerning CX and operational execution:

1. Lack of visibility to the volume, location, and disposition of returned inventory at various points within the Reverse Logistics Supply Chain

2. Inability to meet customer expectations and contractual obligations due to the inability to process product reliability issues

3. Unable to scale repair operations to meet demand

4. Failure to optimize logistics, workstreams, asset utilization and resources (e.g., labor, parts, etc.)

5. Lack of key performance indicators for benchmarking, optimizing, and improving operational performance

6. Missed opportunities to generate income for returned customer goods (collections, upgrade, add on, extended warranty)

Unfortunately, most legacy ERP and Supply Chain Management (SCM) solutions lack the capabilities to overcome these challenges. Legacy systems often comprise disparate applications, which lack the business logic and process flow required to provide critical feature-functionality, robust reporting, and analytic capabilities. As a result, reverse logistics involves time-consuming and labor-intensive processes. These shortcomings in systemic infrastructure have dramatic and negative consequences on financial performance and customer satisfaction, resulting in lost revenue opportunities, increased operating costs and penalties due to compliance issues, and lower profit margins.

Impact of Reverse Logistics on Key Stakeholders

Perhaps one of the most challenging aspects of reverse logistics is that it involves multiparty coordination. Within the multiple touchpoints between the various parties, productivity is limited, and inefficienecks can occur. In turn, these bottlenecks negatively impact CX. Through our research (figure 2), we've identified expectations of each stakeholder in the RLSC from a reverse logistics management systems perspective, the challenges or obstacles each stakeholder faces concerning productivity and efficiency, and the impact these challenges have on CX financial performance and operational excellence.

Figure 2

Implications of Reverse Logistics Challenges on Key Stakeholders

RLSC Stakeholder	Stakeholder Expectations	Challenges/ Obstacles	Implications
Consumers	• Simple/easy returns • Real-time status updates • Rapid turnaround times/quick resolution • Return Avoidance	• Manual return processes • Limited integration between Customer Support and RL functions	• Time-consuming & frustrating processes • Extended wait times • Limited visibility to repair status
Channel Partners (e.g., retailers, resellers, e-commerce)	• Real-time reporting of product returns & credits from OEM • Efficient return process to OEMs • Minimize returns	• Legacy systems • Poor data quality • Lack of integration with OEMs' Reverse Logistics systems	• Inaccurate or delayed reporting & warranty reimbursement • Gaps between returns shipment and credit issuance • Too much time dealing with customer service issues
Original Equipment Manufacturers (OEMs)	• Optimize CX • Maximize RLSC visibility • Synchronized execution between RLSC participants	• Disparate applications • Lack of integration between partners • Legacy systems • Limited repair facility configurations and bandwidth	• Low C-SAT scores • Customer attrition • Manual reporting & intervention • Additional costs
3rd Party Service Providers (e.g., repair vendors, liquidation vendors, etc.)	• Advanced notification from OEMs/Retailers • Ability to forecast return volumes • Real-time, bi-directional data updates	• Same as above	• Same as above

As indicated, current Reverse Logistics Management (RLMS) systems fall short of meeting RLSC stakeholder expectations. Ideally, stakeholders expect their IT systems to provide real-time visibility into return assets in various stages of the RLSC. In addition, they anticipate automation will facilitate smooth and efficient processes required to handle a large volume of reverse logistics transactions. At issue,

legacy-based, manual, and disparate applications result in process inefficiencies, higher costs, and a negative impact on CX.

An Optimal Reverse Logistics Solution

Stakeholders can meet their expectations for improving operational performance and CX by implementing a best-in-class Reverse Lifecycle Management (RLM) system. The optimal solution enables a closed-loop flow of data and assets, facilitates multiparty coordination, and streamlines, integrates, and automates fragmented or siloed processes. Key feature-functionality includes:

- Omni-Channel Customer Support: Best-in-class RLM solutions allow the consumer or end-customer to open a return request from any support channel. The optimal solution also includes functionality that enables a customer to resolve an issue remotely through self-support features, thus avoiding a return.

- Warranty Management: Before issuing an RMA, knowing if a product is under warranty is essential. Best-in-class RLM solutions can perform automatic warranty entitlement. Automation and e-commerce functionality make it possible to collect payment from the customer before performing the work. The repair provider can notify the end-user that a fee for inspecting or repairing the product is required. At that point, the end-customer can determine if they still want to continue with the return process and have the system issue an RMA. In addition, this functionality can also support product/service cross-sell and upsell, including extended warranty attachments and product subscription plans.

- Post-Warranty: Integrated RLM solutions can determine when consumer products are out of warranty and provide upsell options to increase customer satisfaction and generate revenue. Product shipment follows the existing workflows for in-warranty repairs.

- Returns Management: This functionality represents the nucleus of an RLM solution. Best-in-class solutions can automatically create a Return Materials Authorization (RMA) and shipping label for easy returns upon completing the warranty entitlement process. In addition, the system can generate product or parts orders to ship loaner products or exchange the defective parts. Integration with major shipping carriers like UPS and FedEx enables users to generate return shipping labels quickly.

- Customer/Partner Portal: Given that reverse logistics involves multiparty coordination, your RLM solution must have the ability to share and exchange critical data with all the parties to a reverse logistics transaction. For example, consumers want visibility into the reverse logistics supply chain through an uber-like customer experience. Likewise, 3rd Party Repair vendors also want to know when they will be receiving units for repair, the condition, and the value of these units. Customer/Partner portal provides RLSC stakeholders with relevant information to manage day-to-day operations and improve CX.

- Repair/Work Order Management: This functionality tracks parts usage and labor involved in depot repair. It also calculates labor costs and identifies the cost of parts utilized in a repair order. Information regarding parts usage is made available to the inventory management system to adjust stocking levels and support parts planning and forecasting. A best-in-class solution provides a time and date stamp of when a repair technician works on a product and the time spent.

- Reporting & Analytics: Best-in-class RLM solutions provide analytics and machine learning tools to predict trends and shape future modifications repair and logistic procedures. Standard and customized reporting enables RLSC stakeholders to measure, improve, and optimize performance related to financial and operational metrics.

Benchmarks

Depot Repair is an area within the RLSC where RLM solutions can dramatically impact financial and operational performance. This outcome is because depot repair operations exhibit many of the characteristics and challenges identified above. By automating and streamlining depot repair operations, companies experience significant improvements in several key performance indicators.

Figure 3

Impact of Reverse Lifecycle Management Solutions on KPIs

Key Performance Indicator (KPI)	Definition	AVG Percent Improvement*	Primary Driver of Improvement
Depot Repair Productivity	# of units repaired by Technician/Week	37.5%	Automation facilitates a higher level of productivity & efficiency
Average Repair Yield	# of units repaired as a % of total # of units received	15.3%	Better quality data about product issues combined with inspection before repair allows for improved yield
No-Fault Found (NFF) Rate	# of units where the reported mode of failure could not be verified as % of total units received	25.0%	Omni-Channel Support facilities Remote Resolution & RMA avoidance
Average Repair Time Per Unit	Total time worked during the 5-day work week week / Total # of units repaired during the 5-day work week	50.0%	Streamlined and automated processes facilitate the faster repair
Turnaround Time (TAT)	Avg total time from receipt of the returned unit until available in finished goods inventory	30.0%	More efficient processes made possible through digitization and automation speeds total cycle time

*Source: Blumberg Advisory Group, Inc.

As per the chart above, we have identified five (5) KPIs impacted by reverse logistics automation. We have also defined each KPI. In addition, we've identified the average percent improvement companies can expect to achieve by automating, streamlining, and digitizing depot repair processes. Furthermore, we have identified the primary business driver that facilitates measurable improvements in each of the KPIs identified. These data points are based on benchmark research spanning ten years and consider the impact of moving from disparate, semi-automation processes to fully integrated and automated solutions in over twenty different companies from within the information technology and consumer electronics industry.

Customer Case Study

A leading multinational consumer electronics and video game company were experiencing many challenges within its RLSC operations. At issue, their depot repair processes were built on a legacy ERP platform that was not designed to handle high-volume repairs efficiently. In other words, the system lacked critical feature-functionality for processing repairs from a centralized facility.

To meet their complete set of requirements, the company relied on disparate systems. These systems lacked the flexibility to manage process changes required to support their growing business and meet KPI targets. For example, the company could not onboard new repair locations fast enough to meet repair demand. In addition, selected processes within their depot repair operation utilized paper-based forms, which were difficult to share across their repair network. Most importantly, the company lacked analytics and trend data to drive sound decision-making across the repair process.

The company solved these challenges by implementing a new Depot Repair Management (DRM) solution from Mize, a leading provider of Service Lifecycle Management (SLM) software. Implementing Mize DRM decreased administrative IT costs from system consolidation and improved ease-of-use with out-of-the-box functionality. Partner satisfaction improved across the company's repair network now that repair partners had access to a fully integrated, flexible depot repair application. The company also experienced improved efficiency in the repair order process and decreased time-to-repair. In addition, the company streamlined the repair process through digital transformation and KPI dashboard visibility.

Mize DRM improved internal-facing repair processes and played a critical role in enhancing CX and facilitating revenue growth. Implementation of omnichannel support, including an online self-service portal, provided customers with greater visibility into the entire repair process resulting in higher overall customer satisfaction. The inclusion of a customer-accessible order-entry communication channel made it possible to offer product cross-sell and upsell opportunities resulting in a new revenue stream.

Depot Repair Management from Mize

Mize Depot Repair Management (DRM) solution enables RLSC stakeholders to streamline and automate the end-to-end repair process from initiating a customer service request to delivering the repaired product back to the customer. With Mize DRM, RLSC stakeholders can improve CX, reduce churn, and increase profitability by fixing inefficient processes at centralized repair depots.

Mize DRMS allows manufacturers and their reverse logistics business partners to keep customers informed about the status of repairs through omnichannel communications capabilities. Best-in-class depot repair feature functionality also enables stakeholders to shorten product downtime, increase technician productivity, and lower parts inventory costs on repair orders.

Most importantly, Mize empowers end-user organizations by providing them the critical capabilities for efficient repair management. By digitizing essential aspects of the depot repair/reverse logistics value chain, end-user organizations can orchestrate service processes and resources. This capability enables manufacturers and depot repair partners to eliminate custom systems, spreadsheets, and manual tasks. As a result, these ecosystem participants can reduce request-to-repair cycle times while improving service delivery to customers. The net result is improved customer satisfaction and higher profit margins.

Figure 4

Mize Depot Repair Management Solution: Streamline & Automate the End-to-End Repair Processes

ABOUT THE AUTHOR

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Michael Blumberg is President of Blumberg Advisory Group, a leading management consulting firm in the Service & Support Industry. Blumberg is a growth catalyst helping manufacturers, their channel partners, and 3rd Party Service providers power service revenue, market share, and business expansion into previously unchartered territory.

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