



A ClearOrbit White Paper

The Three Pillars of Effective Returns Management

***How Visibility, Automation and Reconciliation
Can Maximize Value Recovery***

Lee Norman
Senior Manager, Enterprise Returns Management
lee.norman@clearorbit.com
512.735.4382
www.clearorbit.com

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THE IMPACT AND OPPORTUNITY

Begin with the end in mind. That familiar adage applies to many situations, including designing effective systems to manage logistics throughout the product lifecycle. However, the sale of a product to a customer does not represent the end of a product's life. Its termination point extends well beyond that. Unfortunately, many organizations today have yet to implement programs to maximize value from assets in the latter stages of the lifecycle. This oversight leads to lower value recovery and excessive administrative costs.

As a point of illustration, consider that one ton of metal scrap collected from personal computers yields more gold than can be extracted from 17 tons of gold ore¹. Considering that millions of personal computers are recycled annually, the value derived from the electronics subcomponents alone is staggering. Capturing that value could differentiate a company from its peers and is demonstrable via a company's Return on Assets (ROA) metric.

That is only one method of quantifying the scale of impact of effective returns management. Consider the following as additional, potential benefits: improved asset turnover due to better inventory management; insights into customer behavior acquired from distilling returns population trends; increased revenues from secondary market channels; improved customer retention rates; and incremental purchases. The list goes on.

Irrespective of the driver, opportunities to improve the value of your returns population abound. The logistics industry has not historically designed for, or controlled the flow of, products from the marketplace back to the organization (or to partners or vendors). Nor have companies built channels to maximize residual value or conversely reduce unnecessary touch points (and, therefore costs). Said differently, companies should redefine the termination point to accurately reflect the complete product lifecycle.

Mass adoption of this philosophy has yet to occur, but there are signs of change. Educational disciplines (both in the Americas and European Union) have in recent years been established; academia is undertaking unprecedented research; analysts are initiating coverage of the arena; and solutions are being brought to market to address these opportunities.

In concert with these activities, a few early adopters are utilizing the termination point strategy to establish a competitive advantage. The purpose of this paper is to guide those who have been chartered to implement more effective returns management and reverse logistics programs.

PROCESS FLOW

To manage returns effectively, one must first become familiar with the five high-level process touch points of returns management in order to understand the context for the three pillars. The graphic below depicts these:



A brief description of the five processes follows:

RMA Create. Upon identification of a need for return, the returning party must be authorized (via Return Material Authorization or RMA) by the seller to send the material back. This authorization marks the inception of the management and control process through what should be extensive rules-based parameters.

Route. Upon granting an RMA to the returning party, the material must be physically moved from location A to location B. This routing is technically what is called reverse logistics.

Receive. The materials must be received (and acknowledged as received) at the destination location.

Disposition. Upon recovery of each asset, the destination must be determined. Generally, determinant criteria are residual asset value, product type, warranty status, and useful life. Some widely recognized dispositions include: return to stock; replacement parts; scrap; repair; remanufacture; refurbish; liquidate; return to vendor, etc.

Reconcile. Each of the abovementioned touch points represents an opportunity for the material flow to experience disruption or to become disconnected from the associated data. Reconciliation enables visibility for, and minimizes exposure to, liabilities attributable to loss, damage, or dissatisfaction.

This paper will make reference to these touch points periodically, as they have direct bearing on the tactics of execution.

THE THREE PILLARS

Successful programs for reverse logistics or returns management should afford:

- Visibility
- Automation
- Reconciliation

While these three pillars do not represent an exhaustive list, by applying them to improve each of the processes described above, companies can drive significant costs out of the returns lifecycle.

PILLAR #1: VISIBILITY

For most companies, returns are a black hole. Shipments show up on the receiving dock without known quantities, value, origination points, product types, or return reasons. The party initiating the return is not known, the company now has an asset, or in cases of a repair or warranty exchange, a liability, that must be addressed.

To effectively counter this challenge, intelligence about the return and its characteristics must be captured at the point of inception, before it shows up on the receiving dock. This information must be shared with the functional areas in the organization responsible for the root cause of each return type. For example, design or engineering should have access to data regarding returns in transit due to quality control issues. Procurement and inventory personnel may need to alter their behavior given impending stock rotations or commercial returns due to errant deliveries. Finance needs to dimensionalize the financial exposure attributable to warranty returns.

So how does one obtain visibility? While there are many ways to affect this, let us explore three of the most effective and easiest to implement.

1. Web-based System

As the returns network is likely comprised of multiple supplier-owned business units and various third party service providers, a Web-based system is recommended. By employing user- and role-based authentication, users from across the world can login and perform functions, consistent with their permissions, 24 hours a day, 7 days a week. This reflects the direction of software as a whole, particularly when considering an IDC study of 512 information technology professionals that shows that 79 percent have purchased or are reviewing the Software-as-a-Service (SaaS)² delivery model, and that spending on SaaS will approximate \$10.7 billion by 2009³. However, it does not speak to the need to integrate the Web-based systems with multiple legacy systems of record. This is critical to visibility. Company and partner ERP, CRM, WMS, TMS, financial applications, or other relevant legacy systems need a tight linkage with any Web-based returns management solution.

2. Unique Order Identifiers

A well-designed returns solution should support configuration of RMA numbering profiles, barcodes, or RFIDs that are unique and smart. This occurs in the initial touch point, “RMA Create,” outlined above. Link an RMA with, for example, a specific customer invoice, serial number or purchase order. Use whatever identifier specific to your organization that provides both the most uniqueness and the most direct means of closure for that return.

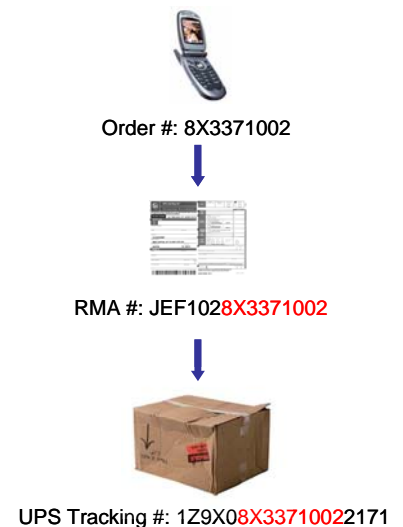
In so doing, scanning of the return or aggregate container of returns at the first induction phase of receipt is reflected systematically to any interested parties, such as the customer, third parties, inventory control, operations, or finance personnel.

3. Carrier Integration

Simply issuing a valid RMA does not guaranty that the materials are moving. So, visibility must be enabled in the “Route” phase.

As this relates to the movement of single or limited numbers of parcels, this may be achieved by manually linking the RMA to the carrier tracking number at the point of RMA shipment.

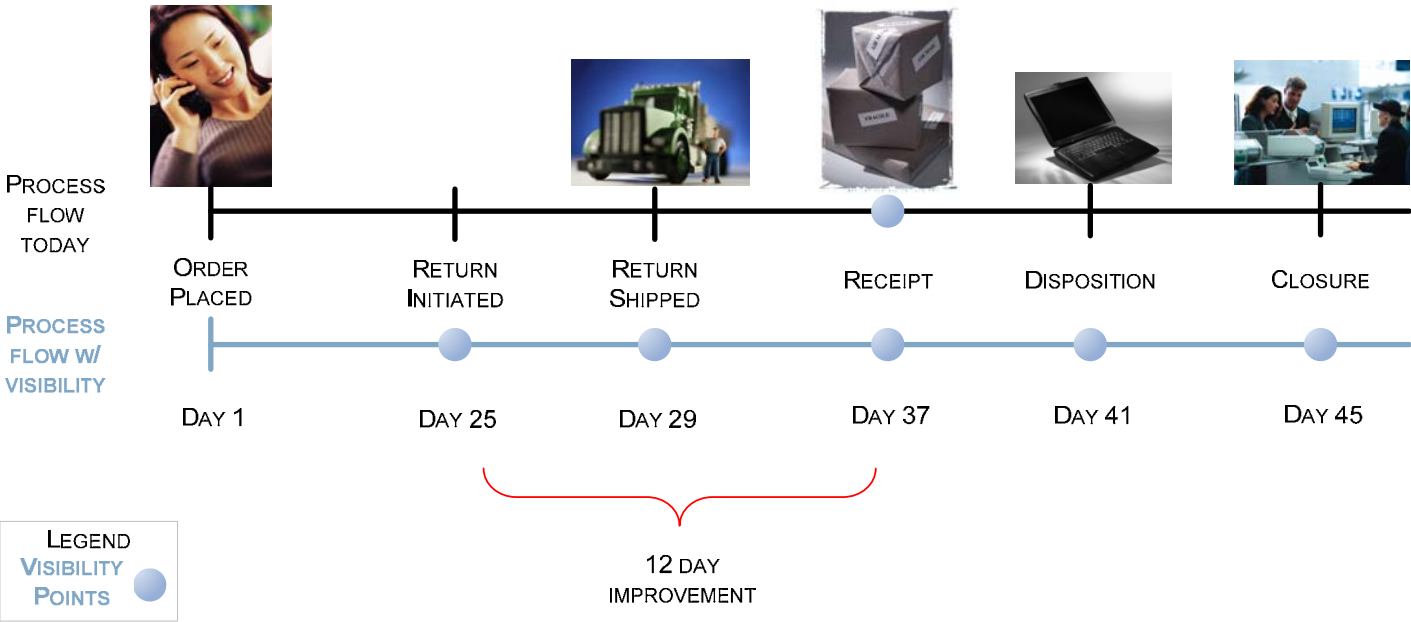
Or, preferably, with respect to containerized shipments, such as cargo or full truckload moves, this may be provided via systems integration with carriers. Generating smart, pre-addressed and carrier-compliant labels at the point of RMA creation facilitates visibility. In so doing, interested parties may at every move in the reverse logistics cycle be kept up to date.



The graphic on the previous page reflects this correlation. As indicated, the original order number (or a subset thereof) is referenced within the body of the RMA identifier and is subsequently included in the carrier tracking number. Alternatively, a unique number may be utilized and thus cross-referenced with that data systemically. While this particular example of smart correlation is oversimplified, it does illustrate the strategy. The use of two-dimensional or base-encoded barcodes, or even RFID tools, only expands the number of viable alternatives.

Employing just one of these tactics is likely to yield an improvement in visibility of four to five days. However, performing the two in concert with one another is ideal, as it enables visibility at the point of inception and maintains it through the “Receive” touch point above. This drives visibility improvements of 7 to 12 days for domestic shipments, and potentially even longer for international moves. See graphic below.

It has been estimated that employing these tactics to improve visibility can reduce return-related contacts 35 percent⁴ and improve resource and shift planning 15 to 20 percent⁵.



PILLAR #2: AUTOMATION

Returns and warranty services are for the most part a manual effort today. Labor has historically been applied to manage all facets of the returns process, from approval to material receipt to exception reporting. As referenced by AMR in 2004, “there are up to 12 times the number of transactions involved in the returns process than to sell the product in the first place.” This translates to costly transactions at each touch point.

One case study involving the implementation of software to better manage the receiving and disposition functions for returns yielded a 13 percent costs savings⁶. More specifically, repair intervals improved over 250 percent, troubleshooting efficiencies increased 5 to 10 percent; administrative manpower improved 89 percent; and sales, quality, and executive involvement decreased 7 percent⁷.

Considering the dramatic savings, let us explore four ways to enable this automation.

1. Profiles

Businesses today engage in ever-changing and complex relationships with one another. Consider, for example, a middle-tier returns network comprised of the following:

- Customer base of several hundred
- Company user group of three dozen
- Five third party service providers (with only one location each)
- Several hundred primary supply vendors
- Two primary liquidation channels

The different permutations of materials flow through this network easily numbers in the millions. Further complicating the management of this network are the various contractual terms and relationship parameters for all parties, and the fact that these variables change over time, as does the geographical dispersion of each of these entities.

Profiles are an ideal way to simplify the management of returns through a network. Profiles are systemic relationship governors. In short, profiles are attributes. They can

be easily applied to parent or child entities, users or groups of users, thus providing a simple and yet effective way to administer changes to business relationships. Adding new users, altering physical locations, changing payment terms, and updating service contracts or product return eligibility by customer becomes simple for a business user. Without it, policy adherence remains a function of paperwork, and information remains inaccessible. The result is a process that is more prone to error when not addressed systematically in the RMA Create phase.

2. Label generation

While RMA creation controls and automates product return eligibility, it does not direct or facilitate the movement of the goods to the destination point. Generating a valid, carrier-compliant, and preferably smart label at the point of RMA approval serves several purposes. First, it reduces delays (by the originating party) due to the inconvenience of identifying the carrier and populating the shipping paperwork correctly. Thus, while the materials may not physically move more quickly, they are likely to experience a reduction in cycle time due to unnecessary processing delays. This is likely to translate to an increase in asset residual value and greater inventory turns.

Secondly, it provides a foundation for building an optimized transportation network for returns. For instance, carrier rate shopping may be enabled depending on the profile of the return; its destination, weight, and girth; and the density of the overall shipment (based on the aggregate number of goods also destined to that location).

Finally, it generates volume into a single or discrete number of carriers to its destination point. This drives more volume into fewer carriers, enables better load planning and thus improves your negotiating position with regard to rates. It also results in the need to manage fewer carriers and reduces traffic at the receiving dock doors. And, it improves the visibility you have into the return touch points in the Route phase, avoiding the “blind receipts” of unexpected items showing up at your receiving dock.

3. RMA and Return Unit Scanning

It is not uncommon today for operations to hand-key returns and RMAs upon receipt and during processing (Receive and Disposition phases). However, generating barcodes that uniquely identify the return and/or the RMA, which travel with that material and are registered (via hand-held scanner) upon delivery, for instance, greatly speeds throughput time.

Innumerable time studies demonstrate those savings. The key, however, is to generate a barcode or unique identifier that can travel with the return until it reaches its destination. To achieve this end, the label or barcode must be rendered prior to shipment in the Route phase.

4. Workflow

Processing product in the Receive or Disposition phases contains vastly differing material movements, often dependant on the return reason and the product type. Industry specific variations exist also. Experienced operators know this all too well. And, they spend considerable time and energy reinforcing the desired processes to the floor personnel or to their third party service provider, whose resources may fail to execute consistently.

Automating workflows, particularly in warranty or advanced exchange environments where asset history must be consistently updated and accessible, drives repeatable processes. With repeatability comes quality and ultimately greater cost containment.

PILLAR #3: RECONCILIATION

Correlating material flows to data flows is a common challenge in supply chain management. With respect to returns, the issue is further complicated. Companies receiving the returns are not in control of the preparation of those materials for shipment, and thus the accuracy of the associated paperwork (or data) cannot be ascertained or the condition judged without first having possession of the item in question.

Also, the volumes associated with returned products make manual reconciliation nearly impossible. For instance, total domestic return dollars in 2004 were estimated at just over \$100 billion⁸. It is not inconceivable that only a small subset of the total volume is reconciled, or even audited, given the time commitment required.

Listed below are three reconciliation touch points that will help minimize a company's exposure to loss in this regard.

1. Underages

Material shortfalls do occur and need to be measured. The most economical means of doing so is at the point of delivery. Exception-based reporting should be implemented to reflect the delta between expected return units and actual return units.

While some industries or business models may necessitate this calculation with a different unit of measure, such as number of packages, pallets, truckloads, containers or lots, the strategy remains the same. Advise stakeholders of underages at whatever frequency makes the most business sense. The reporting should also include the age of the discrepancy so that follow-on processes, such as reminder emails or claims, may be submitted in a manner consistent with policy.

2. Overages

The converse applies to returns as well. It is not uncommon for the recipient to find within a shipment a return unit that was not authorized or that does not match the paperwork (or system data). There may even be a valid reason for this overage. For instance, a carrier may have mistakenly routed a pallet to the wrong location, or the wrong product was labeled as eligible for return by the initiating party.

Despite the root cause, overages do occur. It is best to identify them prior to formally taking custody of those assets, to report these exceptions to stakeholders via canned reporting, and to define (systemically) the desired workflows for handling such exceptions.

3. Credit

Exception reporting should also detail return units where the corresponding credit to the customer, warranty policy, third party service provider, or vendor was not handled properly or in a timely manner. In environments where substantial vendor or partner work is performed, invoice reconciliation should take place as well against internal systems of record to ensure the proper general ledger transactions occur.

Designing these reconciliation mechanisms into a returns management program yield several key benefits. First, they facilitate control over third parties that contribute to the flow of returned materials (and data). Second, they enable the company to proactively work on issues. Missing returns are not in many businesses identified today until the initiating party, typically a customer (or field technician), calls to complain that a particular transaction was not closed. Finally, reconciliation at these touch points saves considerable time and money, in terms of both claims recouped from carrier partners and reduction in labor hours researching overages and shortfalls.

SUMMARY

Returns management is an area today that poses incredible challenges and opportunities for businesses across the world. The simple fact is that the art and science of supply chain management and execution has traditionally focused on forward fulfillment. Managing returns is a chance to increase customer satisfaction (and thus boost loyalty); improve service delivery to end users, vendors, or channel partners; and a means to significantly reduce costs.

An increasing awareness of the problem is driving new market studies, academic dissertations, the establishment of non-profit associations dedicated to the space, and, most importantly, solutions in the marketplace. The key is to develop a comprehensive approach to recover more value from your returned assets. And, the best way to affect success is to manage the returns population through well defined processes. The three pillars—visibility, automation and reconciliation—provide the controls necessary to capture incremental value from returns and to reduce costs.

ABOUT CLEARORBIT

ClearOrbit's mission is to improve the speed, visibility and control of extended manufacturing and distribution supply chains, creating significant economic value for our customers and their trading partners. Since 1994, ClearOrbit has assisted more than 275 clients in automating and controlling process execution within their extended supply networks. ClearOrbit software solutions work within the existing enterprise system to leverage a "single version of the truth," expanding rather than duplicating functionality to eliminate inefficiencies in the supply chain. By using the customer's data model, ClearOrbit delivers on the promise of Enterprise Resource Planning (ERP) systems such as Oracle and SAP with fully integrated supply chain execution and collaboration solutions that address "last mile functionality" issues inherent in most ERP systems. ClearOrbit customers include Cisco Systems, JDS Uniphase and Texas Instruments.



ENDNOTES

- ¹ Marisa P. de Brito, “Managing Reverse Logistics or Reversing Logistics Management?” Thesis, Erasmus University Rotterdam (2004), page 17.
- ² ‘Five Things You Need to Know to Maximize the Service Supply Chain, Reverse Logistics Magazine, page 13, Spring/Summer 2006.
- ³ ‘Microsoft Introduces Software for SAAS Enablement’, www.cio.com, May 1, 2006.
- ⁴ Gartner, 2001.
- ⁵ Optum study, 2001.
- ⁶ eBoomerang case study, 2001.
- ⁷ Ibid.
- ⁸ Dr. James R. Stock, Product Returns/Reverse Logistics in Warehousing, 2004.

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