Electronic waste Challenge for the Manufacturers and Consumers
- page 19 in English page 22 in Portuguese

Managing and Tracking Reusable Assets
- page 28

REVERSE LOGISTICS DIGITAL magazine®

RLA Branded Video

RLA Video
- page 24

Edition 29

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CONTENTS

Reverse Logistics Magazine welcomes articles and abstracts. Please send to: editor@RLmagazine.com

RL Magazine will publish 12 issues annually — 12 new digital editions!

Articles

Features

Message from the Editor

In 2008 my cousin and I decided to tour Europe following the RLA Conference & Expo in Amsterdam. After touring France, Italy, and finally Spain, where we decided to head north from Madrid to Pamplona. We were just in time to participate in the San Fermin, which is more commonly known as The Running of the Bulls. We stayed in a campground outside of town and quickly made friends with the other campers. While lining up for the bus at the campground to the city center, the workers knelt down by my shoes, and duct taped my shoes and ankles. I gave them a raised eyebrow and they said, " Trust us". The opening of the festival is signaled by a rocket that is launched at 12:00 noon by the mayor. Then the party begins! Thousands of people engage in a wine fight, soaking each other with sangria and then tossing the bottles to the ground. After 15 minutes of running around celebrating, the glass was beginning to pile up. I turned the corner and saw two girls being carried out of the town with bloodied feet while holding on to their flip-flops. The glass was everywhere, in piles, loose, in garbage cans and on the walls. That night we got back to the camp to see bandages on at least 25% of the campers, including sadly one of our new friends who had almost severed a toe. I was all too happy to hug the people who taped my feet. Wow, I thought, I wonder what they do with the glass.

The next day the glass and garbage were gone with no remnants of it. How has so much been removed so fast? I was curious. I wrote to the San Fermin Council to see what the process was. They went on to tell me that during the celebration the glass and garbage are taken minutes later to a disposal site for proper recycling and treatment. The city workers work around the partygoers, unnoticed. It is estimated that the street cleaners collect 66,000 pounds of glass from the main square on the first day alone. Glass bottles and jars are an integral part of any community recycling program because it is 100 percent recyclable. They can be recycled endlessly without any loss in purity or quality. Also, glass manufacturers require high-quality recycled glass to meet market and quality demands. This recipe includes recycled glass, soda ash and limestone. The more recycled glass that is used, the greater the reduction in energy use. This lowers manufacturing costs and benefits the environment. Raw materials are conserved, an less energy demand reduces CO_2 emissions and extends furnace life.

Although we were there to partake in the festivities, we were unknowingly involved in a large scale recycling program. It's nice to see that festivals implement reverse logistics for the environment and for their bottom line, which ultimately ensures their future. Party on!

Lyndsey Turner, Editor • Editor@RLA.org

OUR MISSION

Our mission is to educate and inform Reverse Logistics professionals around the world. RLA focuses on the reverse logistics processes across all industries. No matter the industry — High Tech, Consumer Electronics, Automotive, Medical/ Pharmaceutical, Food and Beverage, Apparel, or other — our goal is to provide RL process knowledge to all industries. We want to educate everyone about the Reverse Logistics processes that are common to all industries and to be a catalyst for innovation in developing and implementing new RL processes. We have been and will continue to provide our services to the industry at a moderate price.

Managing the latest information in services such as repair, customer service, parts management, end-of-life manufacturing, service logistics, field service, returns processing and order fulfillment (just to name a few) can be a little intimidating, to say the least. Yet that is exactly what the Reverse Logistics Association provides through our membership services. We serve manufacturers and retailers in a variety of settings while offering ongoing updates on market trends, research, mergers and acquisitions and potential outsourcing opportunities to 3PSPs. We have gained the attention of 3PLs like FedEx, DHL, USPS and UPS. 3PSPs like Teleplan, Foxconn, Flextronics, Canon, Sony and Jabil, along with small- and medium-sized service providers have found that RLA resources help advertise their services to a regional and global audience. OEMs like Microsoft, HP, RIM, and Sony, along with Retailers like Wal-Mart, Canadian Tire, Tesco and Best Buy all participate at our events. Through RLA Events, RLA Connect services and our publications – RL Magazine and the Weekly News Clippings email – we help OEMs, ODMs, Branded and Retail companies find service partners and solutions providers that were previously unknown to them.

REVERSE LOGISTICS ASSOCIATION

Message from the Publisher

Board of Advisors

A Board of Advisors comprised of industry experts has been set up to monitor and assist the Reverse Logistics Association management team in making informed decisions. Advisors include:

Jack Allen – Scientific Atlanta, a Cisco Systems company

Jack Allen currently serves as Director of Global Supply Chain Processes at Scientific Atlanta. In his role, Jack is responsible for the creation, development and performance of Scientific-Atlanta's supply networks in the United States and internationally. His leadership and commitment to the recent success of several product and distribution center transfers, the development of a cross functional supply chain team and the development of an integrated forecasting/ production planning/procurement supply chain planning process resulted in the improvements in Scientific-Atlanta's supply chain and significant annual savings for Scientific-Atlanta.

Christopher Gant – FedEx

Chris Gant is Director for FedEx Supply Chain Sales. He is responsible for all business development strategy and execution for both the FedEx SupplyChain Systems and FedEx Emerging Products Sales teams.

A 20-year veteran of transportation, logistics and electronic commerce, Chris has extensive expertise in the development and delivery of complex supply chain solutions for some of the world's largest corporations inclusive of both Forward and Reverse Logistics. He began his career with FedEx Ground (formerly RPS) in 1989 as an operations coordinator before joining the company's sales team in 1991. He quickly rose through the sales leadership ranks, holding the posts of area sales manager, district sales manager and senior national account manager for FedEx Ground.

Edwin Heslinga – Microsoft

Edwin is currently Director of Reverse Logistics Programs and Policies for Microsoft Devices. In his position Edwin is responsible for development and enforcement of policies surrounding returns and all related costs to the returns and is also involved in the Customer Satisfaction Continuous Improvement Council. Working with Microsoft Call Center and the Microsoft Manufacturing Operations Edwin is driving the improvement of consumer satisfaction through agent assisted support and on-line support while managing the costs.

Prior to working for Microsoft Edwin worked for Jabil Global Services as the Director of IT Solutions, where he worked with various teams on the proposal and implementation of reversed logistics services for various companies at the Jabil factories around the world.

Charles Johnston – WAL-MART Stores, Inc.

Charles Johnston is Sr. Director of Reverse Logistics at the Bentonville Return Center, WAL-MART Stores, Inc. Chuck has been with WAL-MART for the past 14 years and his responsibilities include Returns, Imports, Exports, Tires and Printing and Mailing Distribution.

Hartmut Liebel – Jabil Global Services

Hartmut Liebel was named President, Jabil Global Services (JGS), in October 2004. He joined Jabil as Executive Vice President in July 2002 and was named Chief Operating Officer in October 2003.

Bernie Schaeffer – Motorola

Bernie Schaeffer is corporate vice president of Post Sales Support for Motorola Mobility. His global organization is responsible for providing both in- and out-of-warranty repair services to both consumers and carriers, provides consumer support services through call center, web access and on-device solutions, is the fulfillment engine for value-added services, manages asset recovery on equipment returns and is the source of information on product field reliability.

Doug Schmitt – Dell

Doug Schmitt serves as VP of Dell's Global Field Delivery organization with international responsibility for global break/fix field engineers, same day service delivery, spare parts depots, parts planning, service logistics, repair, reverse logistics and Dell's global command centers. In addition to Doug's role as VP Global Field Delivery he has responsibility for Americas Support Services. Previously, Doug held executive and senior management positions in service and finance at Dell, Inc.

Doug came to Dell in 1997 from Sequent Computer Systems where he held various senior level finance positions. Before Sequent, Doug worked in the banking sector.

Tony Sciarrotta – Philips Consumer Electronics

Tony is Senior Manager of Asset Recovery at Philips Consumer Electronics North America. In this position, Tony leads returns reduction and entitlement initiatives for mainstream consumer electronics, and is also currently concerned with further driving the implementation of electronic registration for Philips products at leading retailers. Working with Philips Sales, Service, Marketing, and the Philips Business Excellence Group, Tony is helping drive several teams to improve the consumer experience and subsequently reduce the high rates of products returned with no defect found.

Susan Wackerman – Hewlett-Packard Company

Susan Wackerman is currently a Sr. Operations Manager in the Americas Supply Chain for HP's Imaging and Printing Group. In her position, Susan is responsible for the Recycling Operations for HP Americas and the Returns Operations / Remarketing for HP Americas Imaging and Printing Group. This includes supply chain development, reverse logistics, disposition and processing, refurbishment, resale, channel management. For Recycling Operations her product responsibilities cover all HP product categories including inkjet and laser printing, digital imaging, supplies, scanners, shared printing, PCs, notebooks, desktops, servers.

Complete biographies of Advisory Board Members are available from the RLA site at: www.ReverseLogisticsAssociation.org/company_advisory.php

Reverse Logistics Association Industry Committees

REVERSE LOGISTICS ASSOCIATION®

Industry Committees are set up to provide a standing forum for Reverse Logistics Professionals to meet on a regional and global basis and discuss common Reverse Logistics issues at the RLA Conferences & Expos. Industry Committees educate the industry on reverse logistics:

- "Best Practices"
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Focus Committees & Regional Focus continued on to page 25

8th Annual RLA Conference and Expo Las Vegas 2012

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CONFERENCE & EXPO

If you are a Reverse Logistics professional – don't miss this event!

RL MAGAZINE GOES ALL DIGITAL ALL THE TIME

REVERSE LOGISTICS ASSOCIATION™ MAGAZINE

It is estimated that a magazine with a circulation of around 100,000 would use paper equivalent to 3 1/2 elephants in weight, or about 30 tons. If that magazine was published 6 times a year, that would be the tonnage equivalent of 21 elephants a year. It has been estimated that U.S. magazine production uses 2.2 billion tons of paper per year and that only about 5% of magazine paper has recycled content and about 20% of magazines are recycled.

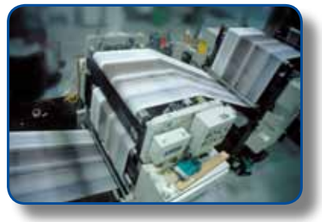
Taking that information into consideration, along with the fact that the digital version of Reverse Logistics magazine has been so successful, we have made the decision to reduce the size of our carbon footprint by making the Reverse Logistics magazine allå digital. We will continue to publish every month, only each edition will be all-digital.

In addition to the above, we decided to go digital for the following positive reasons:

All our digital magazines are archived on our www.rlmagazine.com site for future reference. That means that if you advertise with us, those ads keep on selling when members pull up earlier editions. Our magazines are interactive, so ads you place can provide links for instant access. Additionally, we will be looking at the potential of adding animated ads to further enhance the story for your products and services. We will always be at your fingertips. You don't have to search through drawers or files of paper for Reverse Logistics magazine. Just go to www.rlmagazine.com. Our ads will continue to be competitively priced and we will continue to provide you with the most bang for your buck.

As an association with many high tech members, we strive to continue to work toward maintaining a state of the art association. We feel this change continues to take us in that direction.

Lyndsey Turner - Editor, RL Magazine



Meeting the Aftermarket Service Requirements Of Medical Device Manufacturers

By Michael R. Blumberg

EXECUTIVE SUMMARY

The management of forward & reverse logistics supply chains has come under increased scrutiny in many manufacturing industries. The Medical Device Industry is no exception. However, efforts to improve the efficiency and productivity of the supply chain, particularly with respect to Aftermarket Service, have often taken a back seat to other strategic priorities and regulatory compliance issues within the typical Medical Device Manufacturer. As a result of the current status quo, Aftermarket Service organizations within the Medical Device Industry have experienced an environment characterized by excessive operational costs and inefficiencies.

With the marketplace for medical devices growing rapidly, increased demands for more affordable and accessible healthcare, will force Medical Device Manufacturers to explore opportunities to streamline processes and control costs in order to maintain operating margins and sustain high levels of quality and regulatory compliance. Business process outsourcing represents a viable strategy for achieving these goals. Manufacturers should begin to look outsourcing their supply chains to maintain high levels of quality, realize efficiencies, control costs and improve the overall customer experience.

THE CURRENT STATUS QUO

Management and coordination of forward and reverse logistics supply chains represents a critical challenge for Medical Device & Electronics manufacturers particularly as it relates to issues dealing with aftermarket service and support. A basic goal of any electronics equipment manufacturer is to optimize the quality, efficiency, and productivity of aftermarket supply chains via the implementation of strategies and tactics to ensure the following outcomes:

Metric	All Industries	Information Technology	Telecom Equipment	Medical Devices
Logistics Costs As a % of Total Aftermarket Support Costs	18.3%	21.2%	14.5%	36.5%
Dead On Arrival from Logistics	5.3%	6.5%	3.5%	5.0%
Percent of service requests requiring parts to complete transaction	43.4%	42.5%	28.8%	73.8%
Percent of service requests placed on hold due to lack of parts	10.7%	9.5%	6.4%	17.7%
No Trouble Found Percent of Returned Materials	14.7%	14.4%	11.1%	20.5%

FIGURE 1 - BENCHMARK PERFORMANCE METRICS, BY INDUSTRY

- High Availability of Service Spares Inventory
- High visibility and accessibility to inventory
- Rapid Delivery of Spare Parts within the context of end-customer Service Level Agreement (SLA) requirements
- High velocity of service inventory (e.g., spares, defects, loaners, demo units, etc.) return rates
- Effective testing & screening of defective units
- High quality and productivity of depot repair activities

Supply Chain organizations within Medical Device Manufacturers have a vested interest in achieving these outcomes as part of their quest to maintain high Quality Standards within their industry. Indeed, aftermarket logistics has an impact on quality. However, our analysis suggests that attention to these outcomes appears to be reactive at best. In essence, a great deal of effort is placed on resolving Aftermarket Service and Logistics problems after they occur rather then establishing process and procedures to ensure they do not occur at all.

Most Aftermarket Service Executives and Managers in the Medical Device industry acknowledge the fact that Aftermarket Supply Chain functions have received limited attention. In contrast, these functions receive higher strategic priority within other industries involving Aftermarket Support of electronic (i.e., capital) equipment such as Information Technology and Telecom. As a result, Aftermarket Service Logistics operations within the Medical Device Industry operate less efficiently than their counterparts in other industries. The evidence to support this allegation can be found in the results of a benchmark analysis conducted by our firm which is contained in Figure 1. The data validates that Medical Device Manufacturers have higher costs and are less effective from a quality and productivity standpoint then their counterparts in other industries.

The reason for the status quo within the Medical Industry may stem from the fact that capital equipment typically represents a small portion of the overall business of many Medical Device manufacturers. For many Medical Device companies, capital equipment becomes a tool for automating medical procedures that require the use of consumable and disposable supplies that these firms manufacture and supply. It is these consumable and disposable profits that represent the lion's share of revenues and profits for medical device manufacturers. In these situations, Aftermarket service needs and requirements are often not well understood or managed. Political issues and strategic priorities make it difficult for Aftermarket Service executives to obtain budgetary

resources to ensure the necessary systems and procedures are in place for controlling the cost, quality, and productivity of Aftermarket Supply Chain.

PROBLEMS, PAIN POINTS, & SOLUTIONS

Service Executive have told us that without the proper systems and processes in place to proactively deal with Aftermarket Supply Chain issues, the focus of medical device manufacturers becomes overly focused on compliance issues. If and when problems occur, such as in the case of repeat failures with a spare part, there is an attempt to isolate and identify why the problem occurred, assign responsibility for the problem, and ensure that the problem is not inherit to the quality system. There is a lot of finger pointing and blame with respect to quality and little attention to business costs and productivity, or implementation of strategies and tactics to minimize risk. "It's all misaligned" as one manger who we interviewed describes it, internal groups fight and point finger at one another but no one's looking very hard out what's really failing!" As this statement implies, FDA compliance is both a legitimate concern and a hindrance to quality and productivity improvement of the aftermarket supply chain.

We have attempted to identify (see figure 2) some of the common problems or pain points that are the result of the current status quo within the Aftermarket in order to understand their significance and impact on financial and operational performance. Each pain point is described in terms of the observed symptom, probable cause, and potential solutions. The problems typically related to the effectiveness of inventory management, test & repair, logistics operations

Our analysis suggests that the root causes of these issues are often systemic and procedural in nature, and while they may have an impact on FDA regulatory compliance and quality, they are not caused by a break down or gap in the quality system but

"PAIN" POINT/PROBLEM	SYMPTOM	PROBABLE CAUSE	POTENTIAL SOLUTIONS
INABILITY TO MANAGE OR CONTROL PARTS INVENOTRY ON DAY-TO-DAY BASIS	• LITTLE OR NO ACCURACY ON TIMELY DATA • LIMITED VISIBILITY TO LOCATION OF PARTS	• INFORMATION SYSTEMS DO NOT TRACK CRITICAL DATA RELATED TO PARTS & AFTERMARKET LOGISTICS	• RECOGNIZE IMPORTANCE OF DATA CAPTURE AND INFORMATION SYSTEMS
LOGISTICS AND INVENTORY COSTS TOO HIGH OR INEFFICIENTLY USED	• CONSTANTLY BUYING NEW PARTS • PARTS NOT AT RIGHT PLACE AT RIGHT TIME	• INABLITY TO PROPERLY PLAN, FORECAST, & TRACK PARTS USEAGE • LABOR NOT OPERATING EFFECENTLY DUE TO EXCESSIVE MANUAL PROCESSES	• FULL CLOSED LOOP LOGISTICS MANAGEMENT SYSTEM
LACK OF REAL-TIME CONTROL OVER PARTS	• EXCESSIVE DELAYS IN RETURNS • PARTS NOT DELIVERED IN A TIMELY MANNER • SHRINKAGE AND OBSOLESCENCE	• LIMITED ACCOUNTABLITY FOR PARTS MANAGEMENT ACROSS COMPANY • LACK OF MECHANISMS IN PLACE TO ENSURE TIMELY DELIVERY	• PROACTIVE AND ACCURATE REPORTING, TRACKING, AND FOLLOW-UP
QUALITY & PRODUCTIVITY ISSUES ASSOCIATED WITH DEPOT REPAIR OPERATIONS	• HIGH OF NTF AND DOA RATESL • TIME & COST OF REPAIRS TOO HIGH	• PROCESSES AND PROCEDURES NOT OPTIMIZED • LIMITED INVESTMENT IN TEST DIAGNOSTICS AND QAULITY SCREEING	• INVEST IN TEST EQUIPMENT & QUALITY PROCESSES
LOGISTICS OPERATION NOT OPTIMIZED	• LOW PROFITABILITY AND/OR CUSTOMER SATISFACTION ASSOCIATED WITH AFTERMARKET SERVICE • LOW LEVELS OF EFFECIENCY & PRODUCTIVITY	• LACK OF PROPER SYSTEMS TO AUTOMATE PROCESSES AND STREAMLINE OPERATIONS • LOGISTICS WORKFORCE NOT AVAILBLE ON PROPERLY TRAINED ON AFTERMARKET ISSUES	• ON-LINE REAL TIME CONTROL OF LOGISTICS PIPELINE DOWN TO FIELD LEVEL
INABILITY TO CONTROL AND MANAGE FINANCIAL ASPECTS OF AFTERMARKET LOGISTICS	• DELAYS IN ISSUING CREDITS • DELAYS IN CASH FLOW OR BILLING • FREQUENT BUDGETORY DISCREPENCIES	•INFLEXIBILITY OF SYSTEMS AND PROCEDURES •LOGISTICS SYTEMS NOT ABLE TO CAPTURE FINANCIAL DATA •SYSTEMS NOT ACCESSIBLE TO ALL USERS	• EXPAND SYSTEM FUNCTIONALITY • IMPROVE INTERFACE BETWEEN FINANCE & LOGISTICS

FIGURE 2 - MAJOR SERVICE "PAIN" POINTS AND RELATED SOLUTIONS

instead through a gap in back office systems and processes. This assessment reinforces the points made earlier with respect to manufacturers trying to solve basic business challenges as though they were solely the result of failures within the Quality System. Even more problematic from the perspective of Aftermarket Service is that sometimes the challenges have no impact on quality compliance and thus continue to manifest, ultimately hitting bottom line profitability and customer satisfaction.

As indicated in Figure 1, the problems/pain points identified above can be resolved by adapting systemic and procedural improvements to key functional areas within the Aftermarket Logistics Supply Chain such as Order Management & Fulfillment, Inventory & Warehouse Management, Reverse Logistics & Returns Management, Depot Repair, and Logistics Planning. Our research indicates that these improvements can improve efficiency and productivity by as much as 30% to 40% depending on the functional area under consideration. The most dramatic impacts can be found in the following areas:

- Reduction in order fulfillment processing time (40% to 50%)
- Improvement in returns rates and velocity (time) of returns (40% to 50%)
- Improvement in the forecast accuracy of service parts and returns (20% to 35%)
- Reduction in NTF & DOA rates (30% to 35%)
- Improved productivity & efficiency of workforce (20% to 30%)
- Reduction in cost and time associated with depot repair (30% to 40%)
- Reduction in Inventory costs (30% to 35%)

Clearly, the impact on bottom line profitability as well as customer satisfaction can be quite significant from the implementation of systemic and procedural improvements. However, a great of time, effort, and investment is required to achieve these types of improvements. Furthermore, conflicting strategic priorities over the allocation of limited resources make it difficult, if not almost impossible for real and substantial change to occur within the typical Aftermarket Service organization.

STRATEGIC BENEFIT & VALUE OF BPO

Business Process Outsourcing (BPO) represents a practical way to resolve Aftermarket Logistical Support challenges. (BPO) provides the Medical Device Manufacturer with state of the art system functionality and best in class, quality, compliant processes. The benefit is speed to market and reduced cost of implementation. In essence, a manufacturer can quickly gain capability without the need for major capital investment in infrastructure or disruption to the current business environment common when implementing new systems and procedures.

Today, many manufacturers handle Aftermarket Logistical Support through a centralized operation often with limited capabilities in terms of systemic capability, which in turn does not allow them to effectively perform certain processes that must be automated in order to perform at all. There are situations abound were Aftermarket Support operations do not have access to the right functionality to capture and track key data associated with business processes. For that matter, we have found examples where some organizations do not have any automated functionality at all. Instead, they rely on spreadsheets and manual processes to capture and track information.

Outsourcing not only solves internal operating challenges but provides access to new service options and/or more efficient and streamlined service which not currently available there internal capabilities such as:

- Critical Spare Parts Inventory Management
- Centralized Distribution of Spare Parts
- Inventory Replenishment
- Advanced Exchange
- Reverse Logistics & Returns Management
- Asset Recovery
- Repair & Refurbishment
- e-Waste & e-Recycling
- Reporting & Business Analytics
- On-going Process/Quality Improvements

Manufacturers who have access to these capabilities from a 3rd Party Service provider can in turn offer new services to their end-customers to generate new sources of profitable revenue.

Indeed, while many Medical Device Manufacturers are interested in outsourcing, there exist some obvious concerns with respect to the knowledge and expertise that 3rd Party vendors posses regarding regulatory compliance and quality systems. In addition to robust systems and processes, the ideal 3rd Party Outsource provider must be willing have a scalable solution that fits any size operation in terms of equipment population. This is a particular concern since many Medical Device Manufactures support a relatively small installed base of equipment but none the less can benefit significantly from outsourcing Aftermarket Service Logistics functions. "This represents a big opportunity for us to save money and become more efficient" notes one executive.

SUMMARY & CONCLUSIONS

In Summary, Aftermarket Logistics represents a critical challenge area for many manufacturers within the Medical Device Industry. Far too many organizations spend a great deal of time and attention on ensuring regulatory compliance and far too little effort and investment on the business end of aftermarket support. As result, pain points and problems associated with inventory availability, quality outcomes, and financial management are common. The implementation of state of the art logistics management systems and leading edge business processes is critical to eliminating pain points and problems. Although significant improvements in quality, productivity, and efficiency are available, most manufacturers lack the resources and know-how required to achieve long term sustainable improvements.

Business Process Outsourcing represents an effective strategy for obtaining improvements on a rapid and cost effective basis. Characteristics that Manufacturers should look for in a 3rd Party Service provider include 1) a robust systemic infrastructure, 2) knowledge of industry best practices, and 3) a scalable solution that fits any size operation in terms of equipment population. In essence, the ideal 3rd party service party should be able to combine state of the art technology with quality processes, in order to deliver best in class performance on metrics critical to the Medical Device Manufacturer such as order accuracy, order processing time, rate of return, return velocity, turnaround time, NTF & DOA, customer satisfaction and reduced cost of logistics operations.

Whether the situation calls for a total outsourcing of all Aftermarket Logistics functions or a hybrid of in-sourced and selected outsourced functions, a 3rd party business partner with demonstrated flexibility, control, quality assurance and creativity to ensure that Medical Device Manufactures get exactly what they expect, plus substantial value-added benefits that enable the Manufacturer to expand the services offered to end customers and develop new sources of profitable revenue. By working with a reputable, credible, and qualified 3rd Party Service Provider, a Medical Device Manufacturer can realize a high level of assurance that their supply chain operations can be successfully outsourced to achieve optimal levels of quality and productivity, and costs can be reduced dramatically all while improving the end-customer experience.

RLM

Michael R. Blumberg is a Certified Management Consultant (CMC) and President & CEO of Blumberg Advisory Group, Inc. His firm focuses on providing strategic and tactical assistance to client organizations for improving the overall profitability and quality of aftermarket service operations. Mr. Blumberg has established himself as an expert and industry authority on Reverse Logistics and Closed Loop Supply Chain Management. Mr. Blumberg also serves as a Chairman of the Reverse Logistics Association's Medical/Pharmaceutical Focus Committee

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Electronic waste Challenge for the Manufacturers and Consumers

by Cássio dos Santos Peixoto

Much is expected from the Law! A dedicated law to regulate solid waste, which had the mission to answer to all the inquiries, blessed as a primer. Even after 21 years trying to go through the National Congress, the Law was not clear enough. In its first articles, defined new concepts but did not offered details. In most cases, it was not possible to comply with Law No. 12.305/2010, because it lacked the respective regulation.

Despite the fact that it was regulated since 12/23/2010, by the Decree No. 7.404/2010, many doubts still persist. It was believed that the regulatory decree would supply the details, especially regarding the electronic waste, brought by the policy. However, the lack of detail lead to lot's of doubts.

On the other hand, perhaps, this more open format, can be interpreted for some as more appropriate as it allows

managers to have management suggestions and proposals for a legal coercive command. The Law introduced in its Article 33, the obligation to implement reverse logistics for electronics and components.

This legal command define that such products, their parts and accessories are to be returned to the manufacturer or importer in order to be reused or recycled. In this regard, some expressed again certain frustration as it was expected that the Law could offer a more detailed legal command with the law covering all related aspects. That did not happened! The PNR defines steps to be taken, offers some tools, but allows for a great room of subjective interpretation of manufacturer and / or importer, also allowing the same discricionarity for the characterization of the products and their respective identification, qualification and destination.

The regulation of the electronic waste has been posing a challenge for the government and consumers,as frequently they fail to give proper destination to the product after its life cycle. With accountability for implementation of reverse logistics, manufacturers and / or importers will need to build their networks and prepare their waste management plans. Also, in order to have a clear definition for the implementation or the reverse logistics, sectoral agreements will need to be signed, and this is an important instrument introduced by the PNR. As established in Article 15 of Decree No. 7.404/2010, the reverse logistics systems will be implemented and operationalized using the following instruments: a) sectoral agreements; b) regulations issued by the government or c) by agreements. This flexibility enables the entity/person knowledgeable about the product, its components, or its suppliers to establish its own rules.

Knowledge will be the tool that will allow the most appropriate dynamic for enforcement. This freedom is a positive move in order to allow manufacturer to discuss with their respective "players" (suppliers, distributors and traders) ways of structuring the way the waste will be returned. Great consumption caused the waste to be an importrant issue for discussion however it must be considered that the production generated with the technological boom brings also the need to discuss ways if disposal in order to do not trivialized the ways disposal occurs. The lack of detailed policy does not disqualify the new legislation, by contrast, demonstrates maturity and the great deal o compromised expected by entrepreneurs that will be able to bring their contributions within the limits established by the law. Important to add that the government can create at any time complementary rules

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Professor of Law and Environmental Law the Graduate Management, SENAC College of Environmental MG., Postgraduate in Tax Law,, Post-Graduate in Business Law, Post-Graduate in Environmental Law, Post-Graduate in Environmental Management

Resíduos eletroeletrônicos Desafi o para fabricantes e consumidores

Esperou-se muito da Lei! Uma Lei dedicada à regulação dos resíduos sólidos, que tivesse a missão de responder a todas as indagações, como uma cartilha abençoada. Mesmo após 21 anos tramitando no Congresso Nacional, ela esclareceu pouco. Logo nos primeiros artigos, defi niu novos conceitos trazidos, mas não detalhou outros pormenores. Na maioria dos casos, não era possível cumprir a Lei n.º 12.305/2010, pois a mesma carecia da regulamentação.

Devidamente regulamentada desde 23.12.2010, pelo Decreto nº 7.404/2010, muitas dúvidas, ainda, persistem. Acreditou-se que o decreto regulamentador supriria com detalhes, principalmente, no tocante ao resíduo eletroeletrônico, estreante trazido pela política. Entretanto, o que tem causado muitas dúvidas é a falta do detalhamento que se esperava.

Por outro lado, talvez, este formato mais aberto, seja mais adequado, permitindo que os gestores possam apresentar melhores sugestões de gerenciamento e propostas a um comando legal coercitivo.

A Lei introduziu, em seu artigo 33, a obrigatoriedade de implementar a logística reversa para os eletroeletrônicos e seus componentes. Este comando legal defi ne que estes produtos, suas partes e peças, devam retornar ao fabricante ou importador para que possam ser reutilizados ou reciclados. Momento, em que alguns manifestaram certa frustração. Aguardavam um comando legal mais pormenorizado, que a lei resolvesse e tratasse de tudo. Não foi assim! A PNRS defi ne o que deve ser feito, oferece alguns instrumentos, mas, permite a interpretação do fabricante e/ou do importador. Permite, ainda, que este possa caracterizar seus produtos, identifi cando-os e qualifi cando-os quando à destinação correta necessária.

Verdadeiramente, os resíduos eletroeletrônicos têm sido um desafi o para o poder público e para os consumidores, que na maior parte das vezes, não

conseguem dar a destinação adequada fi nal após o ciclo de vida do produto.

Com a responsabilização pela implantação da logística reversa, fabricantes e/ou importadores deverão construir suas redes e elaborar seus planos de gerenciamento de resíduos. Além disso, para defi nição e implantação da logística reversa, fazse necessária a negociação dos acordos setoriais, instrumento trazido pela PNRS.

Em consonância com o artigo 15 do Decreto nº 7.404/2010, os sistemas de logística reversa serão implementados e operacionalizados por meio dos instrumentos: a) acordos setoriais; b) regulamentos expedidos pelo poder público ou; c) por termos de compromissos. Esta fl exibilidade permite que a regra seja proposta pelo conhecedor do produto, dos seus componentes, de seus fornecedores. O conhecimento é que permitirá os movimentos mais adequados para o cumprimento da legislação. Esta liberdade inicial é uma forma positiva de fazer com que o próprio fabricante discuta com seus "players" (fornecedores e distribuidores), com o próprio comércio, formas de estruturar o retorno dos resíduos.

O consumo fez com que os resíduos tomassem notoriedade, mas o consumo explosivo e o excesso de lançamentos tecnológicos geraram forte volume e o descarte impróprio foi banalizado.

A falta de detalhamento da política não desqualifi ca a nova legislação, pelo contrário, demonstra amadurecimento para que os empreendedores possam trazer suas contribuições desde que cumpram o objetivo primordial da lei. Cabendo, ainda, comentar que o poder público pode criar regras complementares.

RLM

Advogado – Consultor de Empresas, Professor de Legislação e Direito Ambiental da Pós-Graduação em Gestão, Ambiental da Faculdade SENAC MG., Pós Graduado em Direito Tributário, Pós-Graduado em Direito Empresarial, Pós-Graduado em Direito Ambiental, Pós-Graduado em Gestão Ambiental

What is the Reverse Logistics Association?

REVERSE LOGISTICS ASSOCIATION®

At this year's RLA Conference & Expo in Las Vegas you may have noticed a television crew roaming around. The crew was there to capture response to the conference and make a video that displayed the essence of the Reverse Logistics Association. They were also filming segments for a new video series in RL Digital magazine called RLA Rewound. As you view it, you may see some familiar faces. A big thank you to everyone who took time out from their busy conference schedule to stop and talk with our reporter. We hope you will share the video with friends and colleagues as you introduce them to the association and explain what we do and how we can support them. Stay tuned, because we may be talking to you for the next series of videos for RLA Rewound.

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ARTICLE

Managing and Tracking Reusable Assets

By By Keith Schall, Member, Reusable Packaging Association; Director of Business Systems and Technology, Container and Pooling Solutions, Inc. (CAPS)

By implementing reusable transport packaging into their supply chains, many companies are gaining financial and environmental benefits. However, reaching this state requires considerable initial planning as well as ongoing fine-tuning of operations. One of the most important issues a company must address is knowing where all the packaging is within their supply chains at any given time.

This article will review and compare several different options available for tracking assets and raise some of the key decision factors to help you decide which solutions are right for your organization. For the purposes of this article, "reusables", or "reusable packaging", refers to pallets, containers, and dunnage, designed for reuse for its original purpose within a supply chain.

If you're not tracking and managing your reusable assets, then it is likely that someone else is benefitting from your investment. There is a strong secondary market for reusable containers, with resellers and regrinders capitalizing on companies that do not properly monitor their containers. When you're moving product from a distribution center to stores that you own, asset loss might not be a big issue. But when you're going out to an open loop, asset loss is sure to be more prevalent with the potential loss compounded by the number of turns. Perhaps your loss rate per issue is only about 1 percent, but if you have 20 turns, that's 20 percent of the pool you need to replace every year. You have to understand where the assets are going and how you're going to get them back.

To help address the issue of asset loss, the Reusable Packaging Association (RPA) has formed an asset loss committee. The committee is working on the solution side of the problem, working with retailers and other stakeholders to define where the problem resides, and how to address it. A separate group is tackling the problem by prosecuting instances of theft, ensuring the RPA is aggressively tackling the issue from all angles.

AGGREGATE VERSUS INDIVIDUAL TRACKING

There are two primary tracking systems: aggregate and individual. The best way to determine which one supports your supply chain is to look at it in retrospect to the transaction itself. An aggregate example is one truck delivering 2,000 containers. Think of that as one transaction with a quantity of 2,000. An individual tracking system however would account for it as 2,000 transactions, each with a quantity of one. An aggregate system records in the net, and an individual system records each asset.

The chart below depicts key differences between aggregate and individual level tracking. It's designed to be a guideline to give you some direction about which option is right for your organization. For example, implementation of an aggregate tracking system will likely be easier and accomplished in a shorter timeframe than an individual tracking system. However, that depends on the type of aggregate or individual system you select.

Aggregate vs. Individual Level Tracking

SYSTEM TYPE	ASSET IDENTIFICATION	ACCURACY	IMPLEMENATION/ DIFFICULTY	SOLUTION COST	ADDITIONAL HARDWARE
Aggregate Asset Tracking	Visual label None	Medium	Shorter/Easy	Low - Medium	None
Individual Asset Tracking	Barcode Passive RFID Active RFID GPS	High	Longer/Intermediate	Medium - High	Scanners/ Readers (laser/image/ RFID)

AGGREGATE TRACKING SYSTEMS

There are four key aggregate tracking systems:

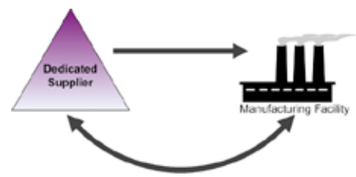
- Tribal Knowledge
- Return to Labels
- In-Out Netting Manual by Container Type
- In-Out Netting Electronic Association with Container

Contents

Tribal Knowledge is the most simplistic of the systems. In this example, there is a dedicated supplier or customer at a manufacturing facility or a

Aggregate Tracking System: Tribal Knowledge

- The simplest of all reusable container tracking
- Most successful in situations featuring:
  - Single origin
  - Single destination
  - Dedicated suppliers
  - Limited number individuals with long tenure involved in the logistics



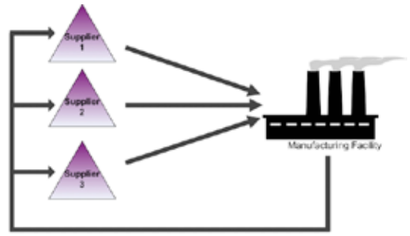
Pros:
- Simple
- Cheap

Cons:
- Manually Intensive
- Error-Prone
- Not Scalable

plant. There is only one origin and one single destination. It is a closed loop with a one-to-one relationship. A Tribal Knowledge system centers on individuals who execute their jobs well. They know which containers belong to which manufacturers, and have an established process to sort and return the assets. This is a very simple and inexpensive system; however, it is prone to errors, and it is not scalable for growth.

Aggregate Tracking System: Return To Labels

- Features generic "Return-To" tag or mark on each bin (potentially a "Please Call" phone number as well)
- Most successful when:
  - Limited number of origins are sending to a single destination
  - Each container is marked with:
    - "Property of Company A" designation
    - "Return to Supplier B" or "Return to Supplier C" as appropriate



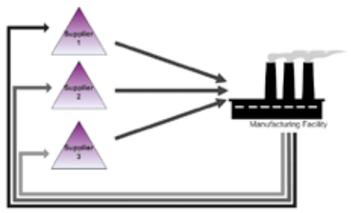
Pros:	Cons:
• Visual and clear instructions • Low cost	• Identification can be removed • Extremely low accountability

The system of **Return to Labels** is a bit more sophisticated, but still fairly simple. A manufacturing plant sends the containers out to three different suppliers, and they in turn, send them back to the plant. "Return to labels" refers to actual identification on the asset that says something along the lines of "return to", or "property of" and it usually includes the company name and phone number. The worker at the dock knows the asset needs to be sorted, set aside, and the company called to come and retrieve the assets. This model is successful when there is a limited number of suppliers and a limited number of container types.

Although this is not very sophisticated, it can be powerful. The labels alert handlers that someone is monitoring and tracking the assets. It sends a message that misplacing the asset might have a financial impact on the receiving company. This model is visual, very clear and rather low cost. Of course, labels can be removed, and ultimately, there is extremely low accountability.

Aggregate Tracking System: In-Out Netting Manual by Container Type

- Users record shipments and receipts out of each geographic location
- Accounting process begins with manual counts, which are compiled, documented and transmitted electronically or manually
- Works best with:
  - Minimal number of reusable container types (1,000 or less)
  - Generic containers that are part of a larger pool (3 or less container types)
  - Works best with 4 or less supply chain points



Pros:	Cons:
• Quick to implement • Self balancing	• Increased assumptions • More frequent discrepancies

The third aggregate tracking system is **In-Out Netting Manual by Container Type**. This is simply the recording of the asset through a tool, like Excel or an Access database. It enables the recording in and out of ships and receipts from one location to the next, almost like a debit/credit system. This model works well with a low amount of suppliers, or a low amount of containers, and it can be up and running quickly. However, it is susceptible to errors when a supply chain starts getting more complex.

The fourth and final aggregate tracking system - **In-Out Netting Electronic Association with Container Contents** - is relatively new in the industry. It is also the most accurate of the aggregate systems. It is built upon the in and out netting through electronic association with the container contents. The following example depicts three suppliers delivering goods to a manufacturing facility. A business-to-business transaction is occurring between these two locations.

Advanced Shipping Notice (ASN) would support this model.

Step 1: A supplier sends an ASN to the plant stating the date and parts that will be shipped.

Step 2: The plant plans for the shipment and ties the electronic data transfer to a packaging spec database, which allows them to determine standard packs and standard densities.

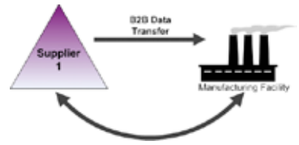
Step 3: When the parts are delivered, the containers are automatically transferred as well.

Step 4: If compliance is established and suppliers are following it, the containers track themselves.

The downside is that it requires some level of integration and IT development. For these reasons, it is the most expensive of the four aggregate models.

Aggregate Tracking System: In-Out Netting Electronic Association with Container Contents

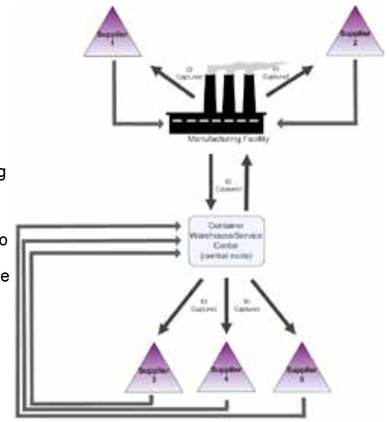
- Variation of manual process with added technology
- Requirements include:
  - Electronic identifier of container type
    - Electronic association with contents of container
  - Electronic documentation of receipt or shipping – B2B (Business to Business) data transfer
    - Document container type and quantity on ASN, BOL, or Packing Slip
    - Electronically document the associated "goods receipt" event
    - Netting accomplished in software program featuring debiting and crediting



Pros:	Cons:
• Highest level of accuracy of the aggregate models • Less manual entry • Forces standardizations	• Requires some level of integration • Higher costs for an Aggregate model

Individual Tracking System: Asset Level Detail

- Reassigns custody of relocated containers among infinite number of users
- Requires:
  - A unique ID affixed to each container
  - Associated electronic database and tracking system that:
    - Documents events constituting custody transfer
    - Include parties potentially acquiring custody and capable of receiving input data
      - Typically shipping/receiving locations, but can be limited to the central node
      - If manufacturer is central node documenting container transfers, no receipt/shipping documentation is required by suppliers
- System is self-correcting
  - Missed events are corrected when subsequent transaction occurs



INDIVIDUAL TRACKING SYSTEM: ASSET LEVEL DETAIL

Now let's consider individual tracking systems. The following illustration depicts a more complex supply chain. The plant has suppliers that send product directly to and from the plant. Perhaps the manufacturing facility is using an offsite warehouse or a third party to sort and manage and clean the containers. That warehouse, in turn, can send them to an additional supplier who can return it to the warehouse, or ship directly to the plant. This model would be too complex for an aggregate system to handle.

Also note that an individual system can be self corrected. This means that if some containers were left behind at a location for some reason, or did not get properly scanned at outbound shipping, the error

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would be identified when the containers were scanned upon receipt at the next location. This is an "exception handling process" and you can create and define the business rules that suit your supply chain.

FOUR METHODS FOR INDIVIDUAL TRACKING

With an individual system, each asset is uniquely identified.

THERE ARE FOUR COMMON WAYS TO IDENTIFY INDIVIDUAL ASSETS:

- Barcode scanning
- Passive RFID tags
- Active RFID tags
- GPS

The system with the longest history is **barcode scanning,** which has been around about 35 years. Barcode scanners, which process linear/2D barcodes, are fairly simple to use, are the lowest cost of the asset labeling methods, work in any industry, and provide the capability for instant reconciliation. Additionally, the scanners can be in the form of a handheld or fixed scanner. The challenges with this method include the inability to handle all the data moving through your system today without additional hardware or software and a very manual intensive scanning process that requires a line of sight to the bar code, with ongoing hardware maintenance and improvements.

A second method is **passive RFID tags** (radio frequency identification), which is the use of an object applied to a product for the purpose of identification and tracking using radio waves. Passive is the relatively inexpensive RFID model since these tags are not powered by a source and only receive their charge when they pass through a reader. When that signal hits them, it bounces back to an antenna and says, "I'm here" so it can be read.

You have probably heard of RFID before. There was considerable hype about it when it first came out and proponents said it would dramatically change asset tracking. Since that time, the hype has died down considerably, and along with it, the costs. It is more affordable today in part because of standardization. That was a big barrier with RFID initially. There were nearly 50 different models, and different standardizations, across different industries and companies. One example of standardization today was developed by the Automotive Industry Action Group (AIAG). They have created their own passive manufacturing RFID standard. Some of the key benefits of passive RFID are automatic data reading (when the reader is fixed). This capability eliminates the manual labor associated with barcode scanning. And passive RFID tags provide RTI tracking at the individual level.

Tracking Model Summary

Feature/Description	Aggregate Tracking Models				Individual Tracking Models			
	Tribal Knowledge	Return to Labels	Manual In/Out Netting	Electronic In/Out Netting	Barcode scanning	Passive RFID	Active RFID	GPS
Ideal for:								
Low container volumes	✓	✓	✓		✓		✓	✓
High container volumes				✓	✓	✓	✓	✓
Number of container types	Small	Small	Small	Medium	Large	Large	Large	Large
Number of locations (plants/suppliers/customers)	Small	Small	Small	Medium	Any	Any	Any	Any
Container value ($)	Low	Low - Medium	Low - Medium	Low - Medium	Any	Low - Medium	High	High
Data								
Accuracy	Low	Low	Moderate	Moderate	High	Moderate	High	High
Bill back accountability	Low	Low	Low	Moderate	High	Moderate	High	High
Reporting capabilities	Low	Low	Low	Moderate	High	High	High	High
Cost								
Software	Low	None	Low	Moderate	Moderate	High	High	High
Hardware	None	None	None	Low	Moderate	High	High	Moderate
Tags	None	Low	None	None	Low	Moderate	High	High
Implementation	Low	Low	Moderate	Moderate	Low	High	High	High
Overhead	Low	Low	Low	Low	High	Moderate	Low	Low

Passive RFID is a lower cost per tag than Active, but be aware that there are other associated costs including consulting resources and environmental challenges such as liquid and steel that impact the viability of RFID reading.

You also need to be aware that RFID is open, which creates security risks. Even if you encrypt your data, it can still be stolen, so be careful to ask about and weigh all security risks before implementing an RFID solution. Additionally, if you are using these in the form of a handheld device, they are still manually intensive like barcode scanners and passive RFID tags require higher equipment costs than barcode scanning.

An **active RFID** tag has its own power source. For this reason, they are much more expensive when compared to a passive tag. The price per tag can typically range from just under $20, all the way up to $80, depending on the features and functionalities. The costs of the readers and installation are also high. The benefits include an extended range: more than 400 feet, and it requires less manual labor than a passive RFID tag because it doesn't have to pass through a portal or a handheld reader. A fixed reading device sends out an intermittent signal and hits the active tag which is constantly sending a signal saying, "I'm here, I'm here, I'm here." The tags have more storage capacity than passive ones, and they have advanced monitoring and read/write capabilities. These capabilities can let you monitor and capture information on motion, temperature and other factors that might affect your product.

Some of the challenges, in addition to cost, are the limited life of the tags. Most last three to five years, although some have been known to last up to seven years. However, eventually you will need new tags and this will require you to re-label your whole fleet; a big cost to operations.

GPS stands for global positioning satellite. We are all familiar with this technology that enables cell phone use. There have been hints of GPS being used on reusable packaging, but moreso in terms of an overall solution. GPS is really a high value tracking

system. If you have a container or a product that is very high value, then you might want to explore this option. However, there are still challenges that need to be worked out, such as limitations of receiving signals indoors.

Which solution makes the most sense for your supply chain? The matrix below will give you some direction. For example, if your container value tends to be higher, you want to invest in better technology to track individual items and give you better accountability. An aggregate system would not be sufficient.

There are strong correlations with implementation costs. If you don't have a lot of money to get a tracking system going, you're probably not going to look toward passive or active RFID.

Also, it is possible to have someone else host and provide your tracking system rather than developing it in-house. This service would come through a Software as a Service (SaaS) provider. The downside of a SaaS provider is that you will continually have ongoing fees. You will keep paying for the system, but you will never own it. Also there are some customization limitations.

A benefit of SaaS is that you don't need to spend resources developing a tracking system in house. Also, with a SaaS provider, the service is scalable. You don't need to worry about adding more containers or more locations. And keep in mind that several companies, including RPA members, are innovating with different types of solutions so the field of possibilities is likely to change.

ADDITIONAL CHALLENGES TO CONSIDER

There are additional issues to weigh when choosing and implementing a tracking system.

These include:

- Freight repositioning
- Loss/damage/maintenance
- Fleet sizing
- Manufacturing lead time
- Pallets and lids
- Storage
- Compliance

In previous years, asset tracking was looked at as a luxury. More and more it is becoming a necessity. With compliance standards and governing entities such as Sarbanes Oxley, its becoming more critical to implement reliable tracking solutions into our supply chains. If a company has $10 million of returnable containers on their balance sheet, Sarbanes Oxley will require that the company know exactly where and when those assets passed what point. This is a significant development and will greatly accelerate the use of tracking systems.

Lastly, it is not enough just to track your containers. You must also incorporate key performance indicators (KPIs) and continual improvements to monitor and optimize your fleet. Even the best technology won't deliver optimal results if you don't have adequate operational procedures.

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The content of this article was originally delivered at the Reusable Packaging Association Fundamentals of Reusable Packaging Workshop at PACKEXPO in 2010.

Keith Schall – Director of Business Systems and Technology, CAPS (Container and Pooling Solutions)

Mr. Schall is an expert in finance and technology with more than 12 years of experience. Previously, he was a controller and a network administrator, where he was responsible for finance technology and was the head of ERP implementation. He was brought on to the CAPS team in 2005. Since then his contributions have included the implementation of the recently enhanced CAPS-TRACTM and CAPScan web-based tracking solutions, increasing accountability and efficiency. Mr. Schall is currently in the Association for Corporate Growth, holds a B.A. Accounting degree from Alma College, and received his M.B.A. from the University of Detroit Mercy.

Read the Press

ROUND2 INC. Names Reid as Vice President

Austin, TX—21 June 2011—ROUND2 INC. announced today that Chris Reid has been promoted to Vice President of Operations. Reid has been instrumental in maintaining ROUND2's low-cost operator model and focusing on operational excellence. In the past 15 months Chris has orchestrated the relocation of two ReDistribution Centers (RDCs) in Texas, opened a new RDC in Ohio, and expanded our US footprint to a combined 496,000 square feet dedicated to IT Asset Disposition (ITAD), electronics recycling, CRT recycling and certified data destruction.

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ECS Refining Acquires ServoTerra, Expands IT Asset Disposition Services

Santa Clara, CA—21 June 2011—ECS Refining, a recycling and end-of-life services company that specializes in electronics and industrial equipment, has acquired ServoTerra, a company with a SaaS (software-as-a-service) platform that provides a business-to-business e-commerce exchange for the remarketing and disposal of computer/IT equipment. The acquisition of ServoTerra and its cloud-based, market-proven technology enables ECS Refining to broaden its service offerings with additional IT asset disposition (ITAD) resale capabilities for its OEM, VAR, enterprise, and electronics recycling customers.

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Ryder Earns Anti-Terrorism Certifications for Logistics Operations in Asia

21 June 2011-Ryder System, Inc., a leader in transportation and supply chain management solutions, announced today that it has received three anti-terrorism certifications for its Asia and Trans-Pacific logistics operations. These certifications enhance Ryder's existing anti-terrorism certifications for supply chain operations in North America.

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PlanITROI, a Leader in IT Asset Value Recovery, Receives ISO 9001, 14001 and R2 Certifications

Denville, NJ—20 June 2011—PlanITROI, an IT Asset Disposition firm in Denville, NJ, today announced that it has received ISO 9001, ISO 14001, and R2 certifications.

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Inmar Named to 2011 Supply & Demand Chain Executive 100

15 June 2011-Inmar, a leading provider of solutions that connect trading partners through consulting, software services and operations, today announced that the company has been selected for inclusion in the 2011 Supply & Demand Chain Executive 100. This listing highlights successful and innovative supply chain transformation projects that are delivering bottom-line value to small, medium and large enterprises across the different functions that comprise the supply chain.

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TAKE Solutions Introduces Vendor Inventory Management and Visibility

Princeton, NJ—13 June 2011—TAKE Solutions Inc., leader in the Supply Chain Management and Life Sciences domains, today announced the release of its Xtended Process Control (X.PC) 5.8 supplier relationship management software. The enhanced version advances purchasing cycles by offering new vendor-managed inventory and visibility features that provide external suppliers full-visibility into inventory levels across warehouses and external depots. As a result, suppliers are able to automatically manage and replenish materials to reduce inventory overage and ascertain products are received on time, thus lowering procurement costs, ensuring product availability, and improving efficiency.

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UPS to Offer New Returns Exchange Program

15 June 2011-UPS is launching a new returns program in October called UPS Returns Exchange. The service is geared toward shippers in the high-tech, healthcare and retail industries and will be available to customers in the U.S., Canada, Europe, Mexico and Puerto Rico.

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FEATURE

Technical Trends

DANGEROUS ROADS

There are any number reality shows on cable TV that feature someone driving on a dangerous road somewhere across the world. What has always been amazing to me is the terrible state of repair of these 'roadworthy' vehicles that humans operate under great peril to their very lives. Often these cars are no more than hoarders-dreams sitting on wheels. It is that drama of survival that keeps viewers coming back to watch in wonder and amazement. You may be surprised to learn that the demand for vehicles in these developing nations with these very roads has now extended all the way to the US and is proving highly disruptive to the current reverse logistics structure of the automotive salvage industry and US car sales.

Many folks generally have some idea of the process that sends wrecked vehicles into that final Reverse Logistics road in the sky, but maybe not so much. First the road is not really final. The typical process has remained unchanged for decades and is outlined in figure 1.

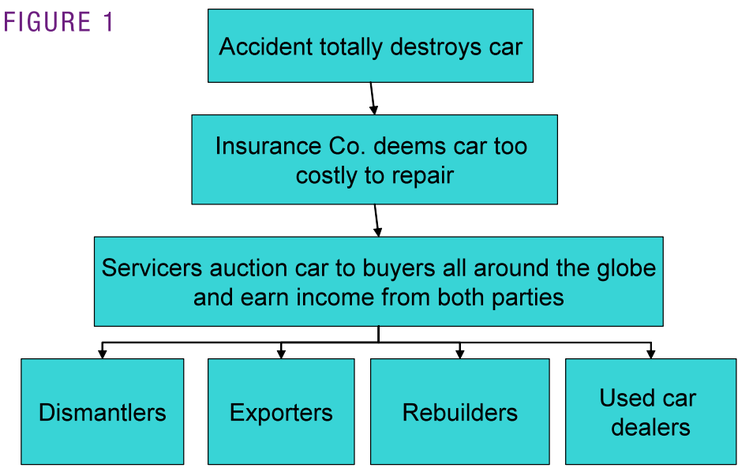
In the past the largest volume of product would go to dismantlers and to some domestic rebuilders. The equation was simple-the cost to clean and test parts from a salvaged car costs much less in labor, materials and energy than the cost to manufacture a new part. Plus the cycle time can be much faster. It is this very value cycle that applies to so much of the value that RL deliveries for any number of products.

However several trends are changing the entire auto salvage industry;

- Down turn in the US Economy
- Programs like Cash for Clunkers
- Web base auction services
- Economic power shift (the so called BRICS) http://en.wikipedia.org/wiki/BRIC

These trends are helping shift the business to a much greater focus on international sales of useable parts, raw materials and complete vehicles. The raw scrap will feed various metals recycling operations that support manufacturing needs in major export powerhouses across Asia. The useable parts are used as an alternate supply chain to provide low cost materials the developing nations need to keep their transportation systems working. All of these market channels are viewed has positive business trends. But the sale and export of complete cars is a growth business that is causing many to be concerned.

FIGURE 1



In the US we have a very high focus on safety. We highly regulate the condition of a vehicle to be allowed onto the roadway. The standards we have here are so high that we deem cars as total write offs to be scrapped and the cars will still run and drive. For the rest of the world a 2000 model car that runs and drives for $1000 is a massive bargain. Heck it's even a bargain for some in the US. In the photos below you will see an insurance auction car I purchased as a project car with my son. The car cost just a few thousand dollars and during

a vacation we did some repair and repainted it and now it serves as my son's date car.

For me, I did all the work and know the car's history. So this was a fun project for me. But what if you purchased this car and you were led to believe it had not been wrecked,

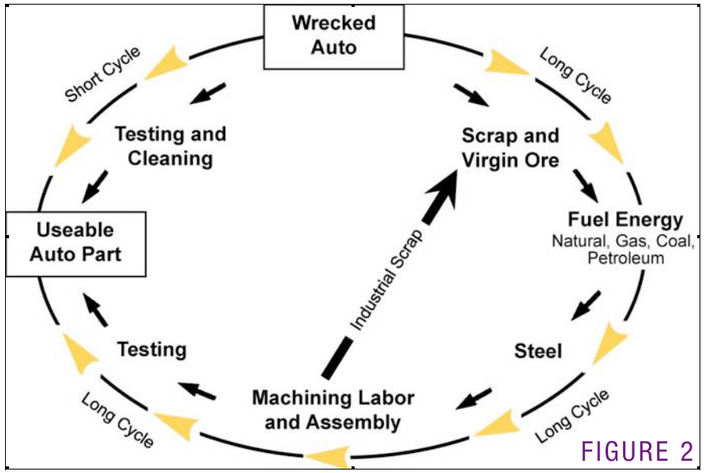


FIGURE 2

and you purchased it as a standard used car? That act is illegal. The salvage industry is working to drive professionalism and focus on recycling and the benefits to the environment as a whole. But the attraction to defraud is strong and these types of fraudulent sales do happen often. So often, that the process in the US has a name, "Car Cloning". Follow this link to the FBI website to read more on how to protect yourself and why this is so profitable in the US. http://www.fbi.gov/news/stories/2009/march/cloning_032409

The same value proposition that makes the crime of Car Cloning so appealing in the US becomes even more powerful outside of the US were labor is cheaper and regulations may be non-existent. In addition the culture in a developing country may not be experienced enough to fully realize the risks to life and the environment. One key effect from the growth in the export of complete cars that is giving people to pause includes much greater demand and competition for the vehicles. In many ways selling wrecks is a seller's market. This international demand is helping bid up the price of repairable salvage cars and helping to keep the cost of used cars in the US sky high.

You may be surprised to learn this is not a small RL market either. It is massive. Most estimates are that automotive salvage generates approximately $20B in revenue and services ~9000 businesses in the US alone. Many of the companies in this sector like CoPart and IAAI are giants of industry by any measure and all serve a critical environmental need. But is it not interesting how easily unintended outcomes in RL help to completely change the way markets function across the world?

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L. Bryant Underwood is Director, Supply Chain for Elbit Systems of America, a leading provider of high performance products and system solutions focusing on the defense, homeland security, commercial aviation and medical instrumentation markets.

FEATURE

Returning Thoughts

The Evolution of Your Reverse Logistics Operations

How rapidly are your Reverse Logistics operations evolving? Over the past 10 years the Reverse Logistics industry has experienced a tremendous evolution, but has your organization kept up? As your understanding of your Reverse Logistics needs increases, your operations can evolve to respond to the requirements and opportunities you encounter. Below is three stage evolution of an example large electronics Brand OEM, based on the experiences of several OEM's. This example highlights many key areas of Reverse Logistics, such as staff, processes, partners or software systems, and how each evolved or was impacted through each stage.

RIGHT-SIZE AND RIGHT-STAGE YOUR EVOLUTION

It is important as you analyze your operations to "right-size" or "right-stage" your Reverse Logistics evolution. For example, in a large, high volume OEM with mature products, Reverse Logistics may be highly outsourced, whereas a mid-sized electronics manufacturer may not have the high returns volumes to justify outsourcing and may prefer a higher level of in-house customer support as a competitive advantage.

Example of Reverse Logistics Evolution Stages of a Large Electronics Brand OEM

	Stage 1	Stage 2	Stage 3
Product Life Cycle	Sales Focus. Higher margin products. Focus on market share, growth, not cost.	Product margins mature, still strong	Product margins mature, increased competition
Reverse Logistics Costs	Do not understand Reverse Logistics costs	Corporate product margins reducing, more emphasis on Reverse Logistics costs	Processes operate cost effectively. Focus away from operations to sales/ marketing for value recovery of returned items.
Customer Service	Responsive only as required, few tools or resources	Better customer service, more responsive	Measuring service levels and response
Staff	Few staff for customer service	much larger in-house returns staff	Staff down – originally 1 then 100 now 3-4
Organization Structure	Decentralized Reverse Logistics	Returns leader	Returns Leader. Accountability of some aspects shifted to other corporate groups (e.g. quality, sales).
Accountability	Little accountability of RL operations to other groups in organization. Little accountability of returns issues caused by other groups (e.g. quality or poor packaging issues causing returns)	Better understanding of RL impact and benefits throughout the organization.	Returns thinking integrated with all operations and partners.
Operations	Returns processing in house	Outsource returns processing	Outsource returns processing and related activities such as value recovery. Customer Service, margins on RL goods, quality feedback
Reverse Logistics Processes	Just starting to learn and understand returns processing	Better understanding of returns . Developing systems. Improved processes.	Defined processes. Defined Partner processes. Integration with corporate operations (e.g. customer service, quality, sales, finance).
Reverse Logistics Automation	Little automation	Automated processes Utilized Partner automation	Integrated automation with partners
Partners	Few partners	Processing partners	Consolidating partners. Leveraging existing partners to do more related work - not always as experts but attention higher.
Systems and Software	Manual systems, spreadsheets	Reverse Logistics management software	Reverse Logistics management software. More focus on Reverse Logistics business intelligence and reporting. Utilize partners systems and share results data
Data	Little data captured	Better reverse logistics data capture	Good data capture. Partner data use. Shared data for analysis specific to group needs (e.g. customer service, quality, sales).
Value Recapture	Slow processing speed resulting in low margins on returned goods resale	Better recapture of value on returned goods	Organized channels with high margin focus
Geography	Multiple in country processing locations	Few nation-wide processors	International process management where possible, with regional or national locations or partners as required.
Financial Accountability	Costs not understood. Difficult to measure.	Costs better defined. Outsourced costs well defined. Revenue opportunities identified. Inventory levels closely monitored.	Better financial accountability. Costs well defined and allocated to divisions. Revenue opportunities recognized, measured and monitored. Move to cheaper repair regions.

CONTINUAL EVOLUTION

It is important to continually look for opportunities to evolve and improve your operations. If you find that you seem to be behind the evolution of your peers or competitors, you will be happy to know that a the Reverse Logistics industry knowledge base, skill base and partners base have been evolving and specializing as well, so you can likely catch up quickly.

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Good Luck!

Paul Rupnow

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