REVERSE LOGISTICS
magazine ®

Serving the Automotive, Health Sciences, Retail, and High Tech Industries

Edition 70

OFFICIAL MAGAZINE OF THE
REVERSE LOGISTICS
ASSOCIATION ®

REVERSE LOGISTICS ASSOCIATION ®

Location: LVCC South Hall
Booth: 31824

January 6-9, 2015 International CES - Booth Schedule

RLA Members can join us at the RLA exhibit booth to educate others on the Reverse Logistics process and on the solutions RLA member companies offer. Reserve your time at http://rltshows.com/ces15_event.php to participate in the RLA exhibit booth. Once you have signed up for time at the RLA booth, you will receive a follow up email with information about booth standards. RLA Corporate membership is required to participate.

Time	Tues., January 06, 2015		Weds., January 07, 2015		Thurs., January 08, 2015		Fri., January 09, 2015	
	Table A	Table B	Table A	Table B	Table A	Table B	Table A	Table B
10 AM – 12 PM	Li Tong (LTC)	Available	Kumar Kandasamy (APSINC)	Guy Marom (AVC CORP.)	Available	Guy Marom (AVC CORP.)	Jerry Schmidt (APSINC)	Available
12 PM – 2 PM	Li Tong (LTC)	Jerry Schmidt (APSINC)	Kumar Kandasamy (APSINC)	Guy Marom (AVC CORP.)	Available	Guy Marom (AVC CORP.)	Jerry Schmidt (APSINC)	Available
2 PM – 4 PM	Available	Jerry Schmidt (APSINC)	Coy Surles (InteliSol)	Guy Marom (AVC CORP.)	Kumar Kandasamy (APSINC)	Available	Li Tong (LTC)	Kumar Kandasamy (APSINC)
4 PM – 6 PM	Available	Guy Marom (AVC CORP.)	Available	Guy Marom (AVC CORP.)	Kumar Kandasamy (APSINC)	Available	Li Tong (LTC)	Kumar Kandasamy (APSINC)

RLA Members Exhibiting at 2015 International CES

Dell	Lenovo	Microsoft
Hewlett Packard	Cisco	Sony Electronics Inc.
Intel Corporation	Samsung Electronics	Reverse Logistics Association

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by Michael R. Blumberg, CMC President

Adoption of tablet computers among consumer and enterprise customers is growing at an incredible rate across the globe. Though the concept of tablet computing was introduced unsuccessfully in the early 2000s with the Microsoft Tablet Computer, the launch of the original iPad in 2010 ushered in the boom era in which we're currently living. Computer industry giants and young upstarts alike design and sell tablets in an ever-increasing variety of shapes and sizes, with features ranging from basic touchscreen functionality to complex integrated networks of sensors and input/output options, and at a wide variety of prices.

Effectively Managing The Reverse Logistics Process

by Pól Sweeney, CTO of Airclic (Recently Acquired By Descartes)

Customers are much more likely to make purchases online if they know that they have the flexibility to make a return if they need to; in fact, it has been estimated that customers return up a quarter of the garments they purchase for one reason or another. If a retailer has a complex return and refund policy, more and more consumers will be turned off from shopping on the site in the first place.

Creating a Sustainable Supply Chain Is Good for the Environment & Your Company

by Adam Robinson, Cerasis

"Going Green" carries more clout these days as companies realize the blend of business with eco-friendly initiatives involves more than social responsibility. In today's ecologically sensitive consumer environment, going green also makes good business sense. See below the rest of this post to see the full sustainable supply chain inforgraphic.

Feature Articles

Returning Thoughts

by Paul Rupnow

How to Setup Your 3PL Operations to Provide Reverse Logistics Services – Part 2

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Non-qualified rates are as follows:

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Kindle   iPad   iPhone   Android   Nook

RL Magazine will publish 12 issues annually — 12 new digital editions! Reverse Logistics Magazine welcomes articles and abstracts. Please send to: editor@RLmagazine.com

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Schedule

RLA Conference & Expo: Las Vegas 2015

LIVE VIDEO STREAMING: If travel or cost restrictions are overwhelming, look at our low cost Live Video Streaming Solution. Sessions at the RLA Conference & Expo: MON - FEB 09, 2015 will be streamed live into your office or home; this includes all general sessions, case studies, panels and tracks.

Video

What is the Reverse Logistics Association?

by Reverse Logistics Association

Features

Message from the Editor

BRANDING VALUES

While a company's image represents a standardized image with its goals, products, and services, there are always the unexpected consequences (positive or negative) of an opinion. An audience is composed of many diverse individuals, all with their own objective beliefs and values.

A company's image is not always the property of a distinct individual. Often comprised of various parts and originating with a purpose in mind, is now defined by the values beliefs within the company as well. Hot topics that cover religion and politics can be a very sensitive subject and can often cost a brand profoundly by distorting its image. It is therefore important to consider how to handle those opinions and learn how to use them to one's advantage.

Individuals can always elicit their own values, but it makes it difficult to remain separate when a brand is being represented. It is important to keep in mind that the public does not separate personal opinion from a brand. This is because people care about their personal values. When you express your personal values, it can weaken your audience's support and cause distrust with a brand. There are times that consideration is given to supporting a questionable topic and then that brings up the thought of whether controversy is still publicity, but will the rewards outweigh the cost?

Just remember that the loud speaker is always on and whether or not the topic is controversial, it will be heard and will inevitably go viral. It is often best to avoid aligning your brand with political or religiously related stances. Neutrality is important because you are always targeting 100% of the audience, even if they aren't doing direct business with you. Word of mouth matters and you always want to be a recommendation.

A brand is composed of many different individuals, all with their own values. While it is unreasonable to force belief on others, when they are expressive of your brand, they are responsible for representing the core values of the company, and not the individual themselves. With the values established, there is still the question of how your brand can embrace the values and beliefs of fellow employees.

Bad public relation situations can often be the result of allowing individuals to express their own values and not take into consideration the brand as a whole. An effective way of managing these types of situations is by encouraging opinions and welcoming honest and open feedback. Allow employees to be open with you, yet remain discreet as well. This can often help to ensure that the brand is "real" and in touch with the world, not outside it.

Brands and opinions are often hard to separate, but can be even more difficult to combine unless you have the right formula created. Be sure the brand and company image takes a stand on its values and that those that represent it always stay in the bounds of enforcing and endorsing those values.

Thank you,
Laura Teifel
editor@rla.org

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Message from the Publisher

STUDENTS ARE DRIVING ACADEMIA TO HIGHER LEVELS IN REVERSE LOGISTICS

14 years ago when I started RLA the level of education on the subject was minimal.

Today many of the number of supply chain academics added content on the subject of RL. The first University, American Public University offers both bachelors and masters degrees online for those are already in field of RL.

Six years ago a young student came to serve as an intern in Singapore at our conference that we hold each year in Asia. She was working towards her Masters Degree in supply chain and became enthralled with the subject of RL. She decided to make that her practice in the future, today Dr. Panda has her degree in reverse logistics. We're seeing students moving out on their own to drive to the highest level of academia to write their thesis on the subjects of reverse logistics.

Dr. Panda

This ground swell in academia must not remain strictly in the field of education. Industry must take upon themselves the responsibility of educating themselves and recruiting those PhD's, Masters & Bachelors degree students into their organization. Informed departments can resolve the reverse logistics issues before they find complacency jettisoned then into the virtual world of retirement. RL is in every company and there should a department managing both internal and external relations for RL. Companies like Dell today dig deep into their vendor base so they really understand the multiple layers of vendors impact to RL.

We encourage all to reflect on this process of Reverse Logistics and if you don't have a specialist in place today it's never too late to go and learn something about the process. Employee a consultant, or spend some time at our conferences and rub shoulders with those who have already implemented RL. Make a change before your company finds itself becoming an albatross.

Best Regards,
Gailen Vick, Founder & Publisher
www.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.

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:

Dr. Mark Ferguson – University of South Carolina, Dr. Mark Ferguson serves as the Director of the Sustainable Enterprise and Development Initiative. Dr. Ferguson has worked in the reverse logistics area for over ten years; teaching classes on reverse logistics topics, consulting with companies and providing thought leadership of the area through his research.

James H. Hunt IV – GENCO Technology Services, Jim is the Senior Vice President, Business Development for GENCO Technology Services. He has responsibility for account management, new business sales and solutions development. He joined GENCO in July 2012.
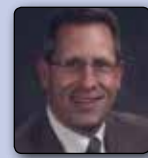
Charles Johnston – Home Depot, Charles Johnston is Director of Repair and Returns at The Home Depot Chuck was with WAL-MART for the past 14 years and his responsibilities include Returns, Imports, Exports, Tires and Printing and Mailing Distribution.

Troy Kubat - Walmart, Troy is now the Director of Logistics Engineering-Grocery at Walmart having worked is way up from Director, Logistics Operations, Industrial Engineering Manager at Walmart - International Division and Japan Expatriate - Logistics Operations Lead at Walmart - International Division

Thomas Maher - Dell, Tom Maher joined Dell in 1997 and is the Executive Director for Global Service Parts. Mr. Maher is responsible for service parts life cycle support in over 100 countries. Mr. Maher's global service parts responsibilities include: planning, procurement, distribution, returns, repair, inventory management, supplier management and parts disposal. These operations support 100% of Dell's warranty customers across all Business Units and all Product Lines.

Vijay Raisinghani, Google, David Moloney, Expert in end-to-end supply chain and fulfillment strategies and execution that cut costs, drive efficiencies, optimize assets, ensure compliance, generate revenue, and deliver high level of service quality and customer satisfaction. In-depth knowledge of supply chain system functionality, including planning, budgeting, forecasting, replenishment, transportation, and distribution.

Ian Rusher - Cisco Systems, 20 Years within Supply Chain Operations, of which the last 15 Years have been spent in reverse Logistics. Previous experience running 3Com EMEA Warranty/Service Repair Operations, Responsible for both Internal and 3rd party repair operational performance and Engineering support.

Ian Towell – Tesco, Responsible for end to end accountability for the non food returns business within UK Tesco, focussing on improving quality, policy application, asset recovery and logistical flow.

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.

Reverse Logistics Association Industry Committees

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"

- Consumer Satisfaction Issues

- Regulations on a Worldwide & Regional Basis Processes that can Reduce Costs

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Join today at www.RLA.org

Las Vegas 2015 - Conference and Expo Schedule
Monday, February 9, 2015

8:00 AM – 12:00 PM
REGISTRATION OPEN
For security purposes, please have a photo ID and a business card ready when checking in at the registration desk.

9:00 AM – 10:30 AM
WORKSHOPS

Dr. Tony Vercillo
CEO - IFMC, Inc.

Gary Patterson
CEO - FiscalDoctor Inc.

Gailen Vick
Executive Director

11:00 AM – 5:00 PM

Charity Golf Tournament - Red Rock Country Club
RLA CHARITY GOLF TOURNAMENT

Sponsorships allow you to host your guests and take advantage of this great networking opportunity. Buses leave at 11:00 am for 18 holes and 1:00 pm for 9 holes of golf from the Rotunda passenger drop-off.

If you would like to participate or be a sponsor, please contact felecia@RLA.org. Sponsorships for this event are still available.

8:00 AM – 5:00 PM
REGISTRATION OPEN
For security purposes, please have a photo ID and a business card ready when checking in at the registration desk.

9:00 AM – 5:00 PM
WORKSHOPS

Tony Vercillo
CEO
IFMC, Inc.

Gary Patterson
CEO
FiscalDoctor Inc.

Gailen Vick
Executive Director
Reverse Logistics Association

Tony Sciarotta
Reverse It Sales and Consulting

1:00 PM – 4:00 PM   **EXHIBIT HALL OPEN**

12:15 PM – 1:00 PM   **LUNCH FOR WORKSHOP ATTENDEES**

1:00 PM – 2:00 PM   **INDUSTRY COMMITTEE CHAIR/CO-CHAIR STRATEGY & REPORTS MEETING/LUNCH**

CONSUMER ELECTRONICS
Paul Baum, CEO
PlanITROI

DATA STORAGE
Thomas Burman
Dir. Global Service Operations
Western Digital

SOFTWARE SOLUTIONS
Leonard Schneeman
Sr. Vice President,
Chief Technology Officer
DEX

STANDARDS
Ron Lembke
Associate Professor
University of Nevada

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Tony Sciarotta
Reverse It Sales and Consulting

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Felipe Ortiz
Administracion O Logistica Reversa
Grupo Pão de Açúcar

EUROPE CHAPTER
Charlie O Shaughnessy
Global Returns Manager
Intel

LATIN AMERICA CHAPTER
Guillermo Fernández deJáuregui
CEO
ONILOG

5:15 PM – 5:30 PM   **AWARDS GALA**

5:30 PM – 7:00 PM   **AWARDS GALA**

8:00 AM – 5:00 PM

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9:00 AM – 10:30 AM

WELCOME REMARKS & KEYNOTE

Gailen Vick
Executive Director

REVERSE LOGISTICS ASSOCIATION

10:30 PM – 11:30 PM BREAK

11:30 PM – 5:00 PM   CONFERENCE SESSIONS

Tony Sciarrotta
Asset Recovery
REVERSE IT SALES & CONSULTING

Steve Freemerman
Manager, Reverse Logistics *GoPro*
GoPro

Lisa Cotter
Sr. Director Reverse Logistics *Best Buy*
BEST BUY

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USDOT/PHMSA
USDOT

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p&f USA

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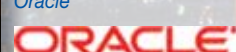
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ARKANSAS

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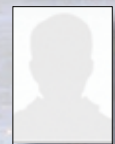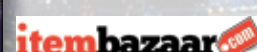
Neil Meischeid
Sr. Director, Supply Chain
Rite Aid Corp
RITE AID

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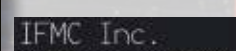
Amedio Palmieri
Western Operations,
Lean Six Sigma Black Belt and Lenovo
lenovo

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Sinqfar
SINQFAR

Hyunsoo Kim
Professor
Kyonggi University
KGU

Joe Walden
Lecturer, Supply Chain Management
The University of Kansas
KU

5:30 PM – 7:00 PM   CONFERENCE RECEPTION

8:00 AM – 12:00 AM

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9:00 AM – 12:00 PM

CONFERENCE SESSIONS

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Executive Director
Global Supply Chain
Lenovo
lenovo

Tony Sciarrotta
Asset Recovery
REVERSE IT SALES & CONSULTING

Robert McIntosh
Executive Director
Dell, Inc.
DELL

12:00 NOON

CLOSING REMARKS / LUCKY DRAW

Lucky Draw Sponsorship Available. Must be present during the drawing to win.

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New Developments in Tablet Computer Repair

Whitepaper by: Michael R. Blumberg, CMC President

Adoption of tablet computers among consumer and enterprise customers is growing at an incredible rate across the globe. Though the concept of tablet computing was introduced unsuccessfully in the early 2000s with the Microsoft Tablet Computer, the launch of the original iPad in 2010 ushered in the boom era in which we're currently living. Computer industry giants and young upstarts alike design and sell tablets in an ever-increasing variety of shapes and sizes, with features ranging from basic touchscreen functionality to complex integrated networks of sensors and input/output options, and at a wide variety of prices.

As the rate of tablet adoption and usage climbs, so too does the need for testing, screening and repair of these devices. Current implementations of in- and out warranty service models suffer from myriad reverse logistics inefficiencies that result in increased costs associated with processing returns and getting back into the market. The issues involved range from front-line customer support challenges, to costly testing, screening processes to the geographic distribution of quality repair facilities.

In a new market research study of OEMs, Retailers and Wireless Carriers in the tablet repair market; respondents highlighted key factors in selecting a tablet repair vendor. In the following pages we discuss how the booming tablet market makes choosing a 3rd Party Reverse Logistics vendor critical to increasing associated forward and reverse logistics velocities and cost efficiencies, which ultimately affect the bottom line. We emphasize the market and benefit of "optimized" screening and cleaning for retailers and wireless carriers (with generous customer returns policies), as well as the manner by which functional testing can augment the speed and quality of the return, repair, and/or replacement, of tablets. Additionally, we describe the characteristics of the ideal tablet 3rd Party Service Provider (3PSP) and
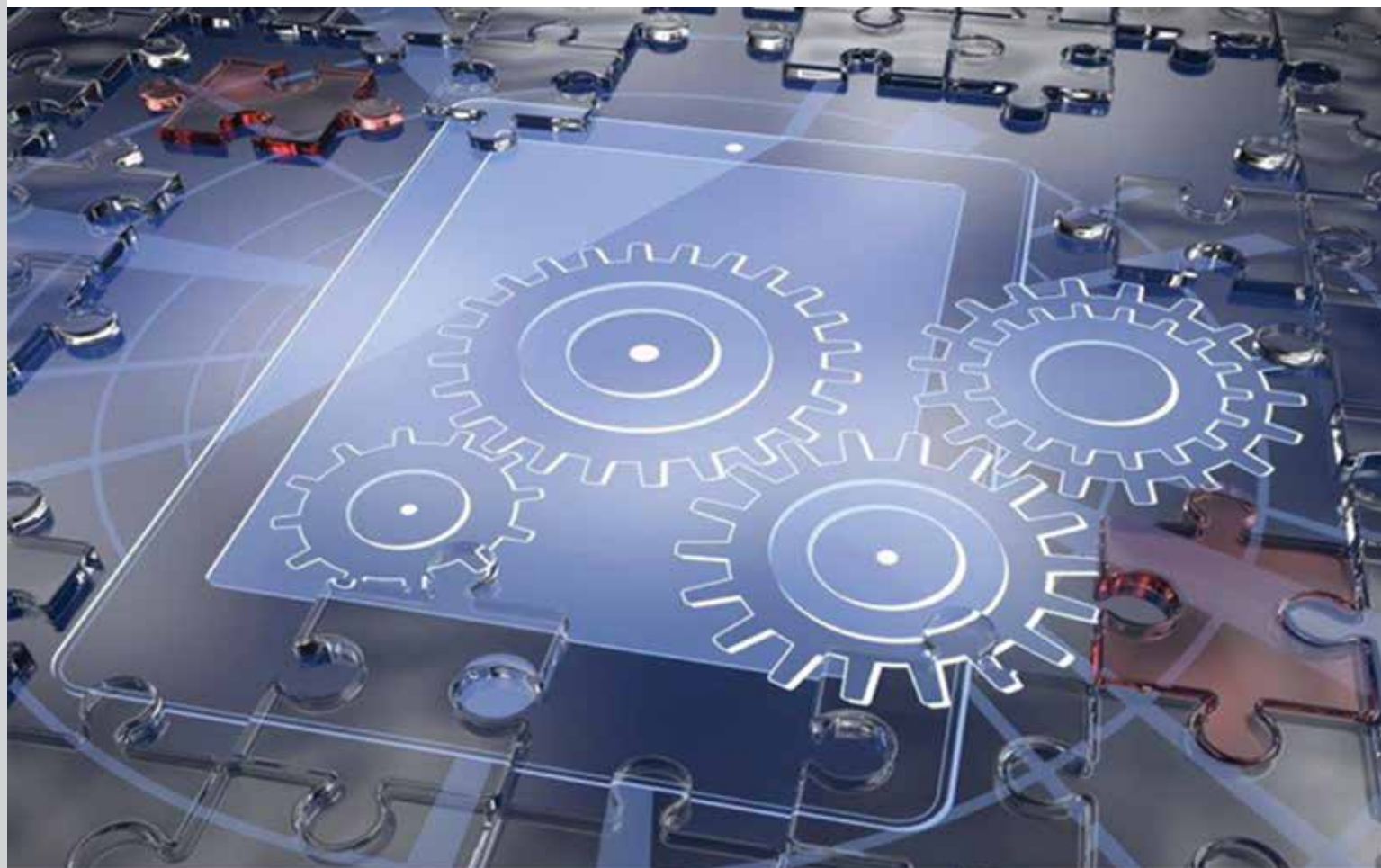
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- Marcelo Cairolli, Arrow Value Recovery
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- Marko Niinisto, Philips
- Charlie O Shaughnessy, Intel
- Ian Rusher, Cisco
- Ivan Russo, Verona University
- Derek Scott, Canon

LATIN AMERICA
Chairperson: Guillermo Fernández deJáuregui, ONILOG

- Guillermo Fernández Dejáuregui, ONILOG

NORTH AMERICA
- Paul Rupnow, Andlor Logistics Systems Inc

the business benefits with this approach. Finally, we take a look at the multi-tablet testing system, global facilities and IT infrastructure of one particular vendor, CTDI, illustrates some of these concepts.

THE TABLET COMPUTER MARKET

The Tablet Computer market is young, already large, and very much still growing. Even in North America, which leads the world in early adoption of tablets, the market is far from saturated. Tablet computer shipments in North America will have nearly doubled between 2012 and 2014, to almost 120 million units shipped this year. North American Tablet Installed Base is on a

trend is now commonly referred to as the dawning of the "Post-PC era."

As this so-called Post-PC era evolves, manufacturers are experimenting with varied tablet computer sizes, feature sets and price points. Major software vendors focus more on developing tablet-specific platforms and applications, as well resulting in the development and deployment of Tablet Computers in vertical market applications like Point of Sale, Supply Chain, and Healthcare. With more hardware and software applications to fit more and more use cases, tablet adoption has moved from leading edge early adopters to mainstream consumers. And the early

NORTH AMERICA TABLET INSTALLED BASE & SHIPMENTS (K)

* A Daniel Research Group (2013)
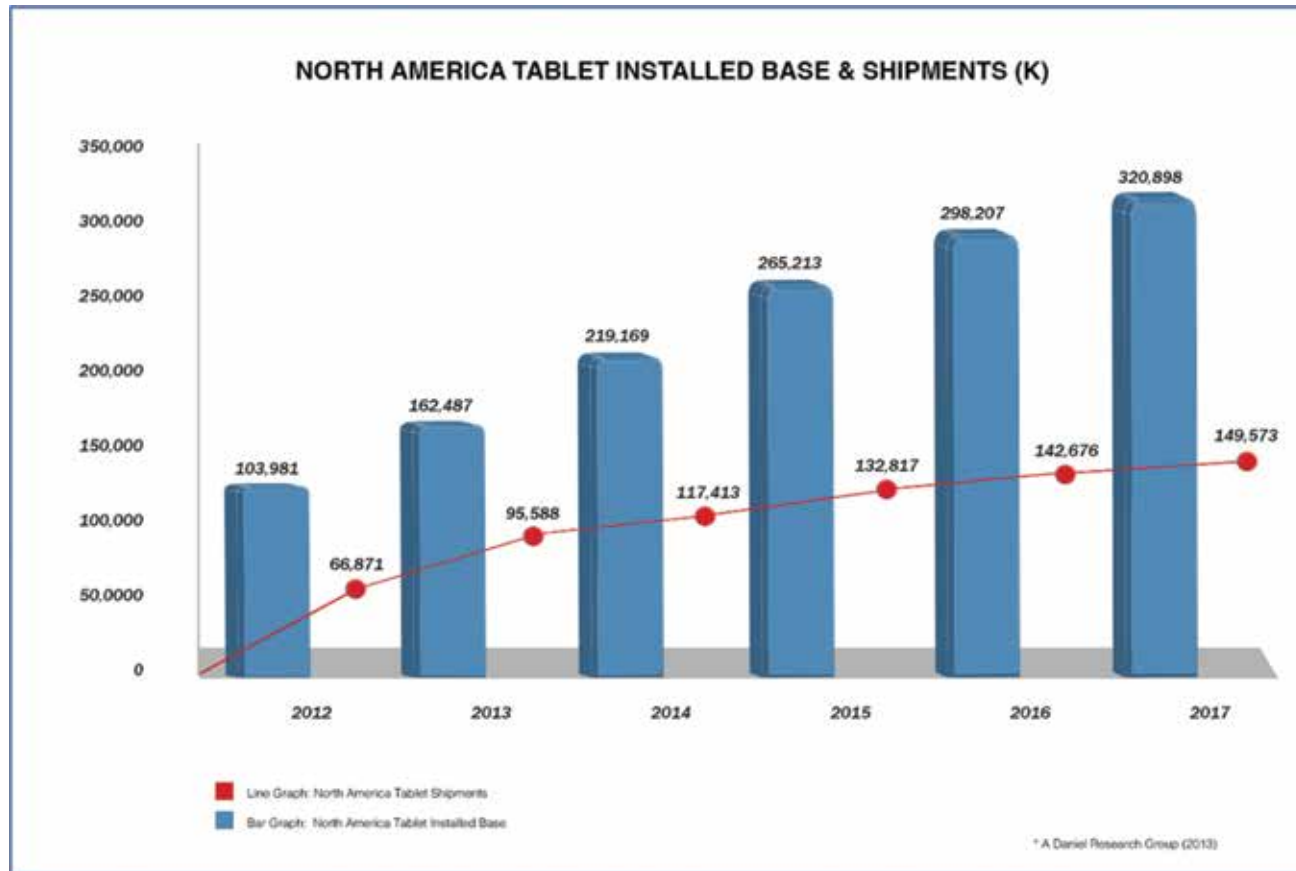
similar trajectory, doubling from 104 million in '12 to a projected 220 million this year. Continued rapid growth is projected over the next several years, as well, with the installed base projected to double again to more than 320 million units in 2017.

We can trace this exponential growth to a number of trends in the consumer and enterprise spaces, including the continued evolution of both technology and usage habits away from desktop machines and towards mobile devices. As tablets become cheaper, better and faster, users are replacing aging PCs with sleek new slates. This

adopters are upgrading to newer models. Refresh cycles for both hardware and software are being established and, as such, the distribution between new vs replacement tablet shipments is a key data point to understanding the overall market.

CURRENT SUPPORT MODELS

Organizations involved in the tablet support market are first and foremost affected by the high return rate currently associated with retail sales. Generous return policies often allow buyers 15-30 days to return a tablet even after opening the box and using the device. As

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such, buyers' remorse has become a significant cause of return. Often times tablets returned due to buyers' remorse exhibit little or no defects - however small - but become liabilities due to insufficient reverse logistics supply chains. This is because these units still need to be processed so that the seller (i.e., retailer, carrier, OEM) recovers maximum value.

Another problem with the current tablet support market is a lack of front-end screening and diagnostics to resolve end-users technical issues and challenges with the devices. Sufficient telephone-based or remote screening of tablet problems would greatly reduce the number of units returned through the reverse logistics supply chain, often as easily as walking the end-user through some simple knowledge-acquisition to "fix" their device problems. Similarly, not enough troubleshooting occurs post-return, before the units are shipped back to the manufacturers or their authorized repair providers. Roughly, consumers return 5% to 10% of all new tablets sold in North America, with retailers usually sending those units directly back to the manufacturers without screening or diagnosing the units themselves.

Of these returns, some 30 to 40% are classified No Fault Found (NFF), and another 40% are Cosmetic Repair. The remaining 20% or so suffer from cracked screen and broken board issues that require more costly repairs. However, the repair yield on defective units is typically in the range of 50% to 60%. For some OEMs, this cost is too great, and results in selling the defective components for scrap value. In other words, more than three-quarters of returned tablets are either fully functional or in need of only minor, topical fixes before being repackaged and placed back in finished goods inventory. But almost all of these units are immediately sent back to a 3PSP where they are screened, tested, cleaned, refurbished, repackaged and then resold. Even when it comes to devices covered under warranty, consumers send their defective devices through the same reverse logistics supply chain in exchange for a new, replacement device. These activities, especially those related to testing & screening, have inherent challenges. For the most part, they are largely an inefficient, in terms of both cost and time as they are often extremely labor intensive and may not take advantage of advanced technology for automating the process.
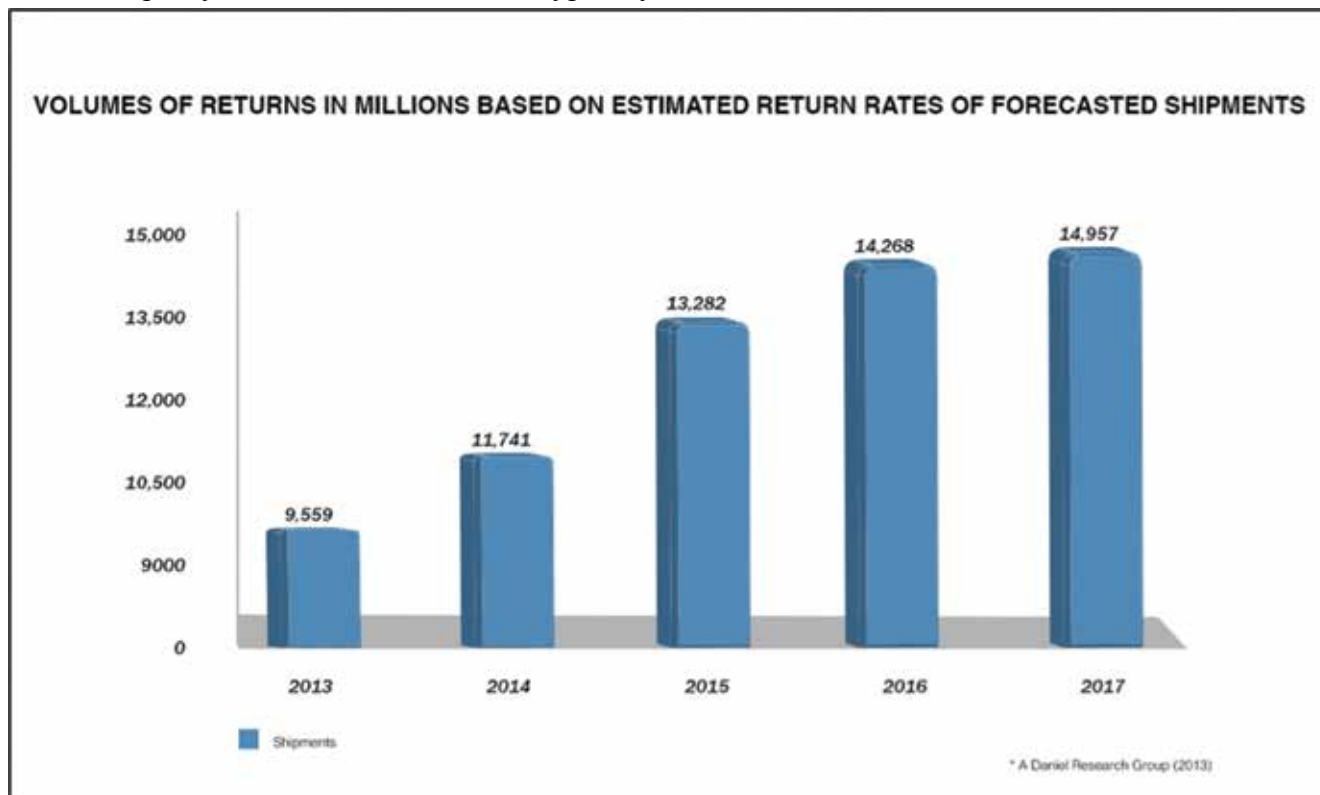
Furthermore, the time spent transporting tablets to and from centralized return and facilities adds to the overall inefficiencies when processing returned units. The optimal solution is to move towards a regionalized reverse logistics model with several facilities located strategically throughout a region (e.g., North America, Europe, etc.) for screen, clean, and repair. This offers the shortest time between out-of-service tablets and those either returned and in use again; remarketed as is; utilized

VOLUMES OF RETURNS IN MILLIONS BASED ON ESTIMATED RETURN RATES OF FORECASTED SHIPMENTS

* A Daniel Research Group (2013)

for maintenance replacement; sold as a refurbished unit or for reclamation, etc. Very few vendors operate multiple facilities across the world, let alone high volume regions like North America. As such, the screening and repair process suffers from reverse logistics inefficiencies based largely on too many devices having to travel too far for problems that could be solved locally.

Volume of tablet returns is expected to rise over the next several years. In turn, the volume of devices needing test, screen, and repair activities will also increase. For 2013, tablet returns in North America were estimated between 7.6-14.3 million units. By 2015 the volume of returns could rise as high as 20 million units. Those numbers will continue to increase in the near-term following 2015.

ALTERNATIVE SOLUTIONS – PROS & CONS

Clearly the tablet repair market operates inefficiently. As things stand now, everyone loses: retailers, manufacturers, service providers and consumers alike. A variety of alternative solutions to the current methodology offer benefits, but these are not without their downsides as well.

Improved front-end diagnostics is the first line of defense that could aid efficiencies. Diagnosing the problem with a tablet before its returned by the consumer - and subsequently returned to the manufacturer by the retailer - would significantly reduce the number of devices needlessly returned, tested, and repaired. The problem here lies with both retailers' and consumers' attitudes towards adding a layer of remote support. Many retailers currently offer a "No Questions Asked" return period of 15-30 days on tablet computers. Consumers like this policy because it gives them the chance to try a new device in their real life workflow with the safety net of getting their money back should buyers' remorse set in. Retailers, of course, are reluctant to do anything that might drive their customers away to a competitor. This undoubtedly includes revoking existing policies. Moreover, adding a layer of remote diagnostic support will introduce an additional cost to retailers' tablet sales operations. Even when it comes to in-warranty repairs, manufacturers are more likely to issue an advanced exchange unit then attempt to diagnose the problem remotely. The defective unit is then sent back through the reverse logistics supply chain and added to the costs and liability associated with warranty support.

As suggested earlier, a second way to improve reverse logistics efficiencies is to move the return & repair facilities closer to the customer/retailer through a regional service model. Many 3PSPs currently offer only one, centralized US-based repair facilities. This practice directly contributes to inefficiencies in the reverse logistics supply chain - i.e. Increase time and fuel costs associated with shipping tablets great distances for testing and screening work, and then possibly on to other facilities for refurbishment and liquidation. Performing

critical reverse logistic functions in strategically located facilities throughout the United States would cut transit time, resulting in increased velocity associated with turning distressed inventory from a liability into an asset. Of course, the downside associated with this solution is cost. Opening additional facilities on American soil, if ones do not exist already, is costly, both on its own and as compared to running offshore operations.

More effective device testing and screening prior to repair is a potentially viable alternative solution. Various methods of testing exist and, again, each carries with it pros and cons:

MANUAL TESTING:
• Inexpensive and fast to implement but subject to human error and costly in the long run.

DIAGNOSTICS TESTING:
• Automated but reliant on device/API/OS-specific software wrappers. New tests may need to be created with new releases of a device, an API or OS.

BOARD LEVEL TESTING:
• Testing the devices in developer or engineering boot mode. This process can be automated. The problem is that it does not address the problems with the device from an end-user perspective and, as such, real-world functionality problems may be missed.

OPEN UNIT TESTING:
• The device's screen and cover need to be removed in order to test the board on a bed of nails. This breaks the integrity of the tablet's seal and adds time to the process, resulting in increased cost.

EMBEDDED DIAGNOSTIC TEST:
• This type of testing can query the hardware, but not stress its functionality.

AUTOMATED TEST EQUIPMENT (ATE) OR "BED OF NAILS" TESTING:
• This type of testing, leveraging the investments the OEM or their contract manufacturers make in end-of-line manufacturing testing, is costly, difficult to duplicate and locate regionally, and may require

IP PRODUCT LIFE CYCLE

Supply Chain				AfterMarket Supply Chain
FORWARD LOGISTICS				**REVERSE LOGISTICS**
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• Technology Roadmaps
• ASIC Development
• Mechanical Design
• PCB Layout
• Prototyping
• New Product Introduction
	• Vendor Relations
	• Planning
	• Procurement
	• Inventory Planning
	• Component Fabrication
		• PCB Assembly
		• Box Assembly
		• Volume Manufacturing
		• Integration
		• Configuration
		• Final Testing
		• Distribution to Customer
		• Customer
		• Fulfilment Transportation
				• Customer Service (helpdesk)
				• Depot Repair/ReMan
				• Service Logistics (Field Service)
				  • Transportation/Warehousing
				  • Spare Parts Management
				  • RMA Management
				  • Replacement Management
				• Refurbishment
				• Screening/Count Auditing
				• End-of-life Manufacturing
				• Remanufacturing
				• Fulfillment Services
				• IT Process Management
				• Recycling
				• Scrap/Waste Management
				• Gray/B Channel Management
				• Warranty Management
				• Asset Management/ITad - IT Asset Disposition
				• Sustainability/EPR - Extended Producer Responsibility

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considerable labor in terms of the finished product and the multiple stages of testing implemented. It is also generally slower, due to it being an end-of-line test, and geared for manufacturing facilities, not repair facilities. Furthermore, Bed of Nails tests the connectivity between components as opposed to their functionality.

As evidenced, current test methods for tablets possess significant shortcomings, though testing on the whole unit does offer efficiency improvement over the "just send it back" handling of returned tablets.

LIQUIDATION IS ANOTHER OPTION. Liquidating returned tablets for their asset recovery value may seem like the most expedient approach for extracting value out of returned devices. However, it is a money-losing proposition in the long run given the high rate of NFF and cosmetic repairs, combined with the increasing volumes in the industry. Furthermore, it does not address issues associated with defective or failed components. As such, the manufacturer and its 3PSPs loose valuable intelligence that can be utilized to improve the design and/or engineering of tablet devices. Though tablet liquidators persist, this approach in the current market will have limited benefits as volumes increase and consumers hold onto their devices for an extended length of time.

OPTIMIZED TEST & SCREENING SOLUTION

An optimized screening system can maximize efficiencies while avoiding many of the shortcomings exhibited by the aforementioned testing methods. Screening systems able to test 10 or more tablets at a time can offer increase speed and reduce costs associated with testing. Consistency of process and results will also rise thanks to the use of automated and semi-automated testing systems. Thus, "Screen and Clean" promotes the cost effective recovery of good units with minor cosmetic refurbishment to be processed for resale. Additionally, they can be used as maintenance replacements, or for the dispositioning of products into other markets at the best return for the retailer.

Leading-edge screening technology includes application diagnostics and embedded diagnostics that can be loaded onto devices. Tests can be run on devices in user mode as opposed to "developer" or "engineering" mode to ensure that everything works as it should from the end-user's perspective. Functional testing of device circuits

may take the form of "parametric" testing, which leads to an even greater level of reliability and quality of results.

A regionalized approach to testing, screening, and cleaning the units can also speed up the reverse logistics flow. Performing these functions in strategically located facilities in high volume areas within miles of major metropolitan areas will improve efficiencies as described in Section 4 above. Authorizing these facilities to handle key activities like repair, refurbishment, and liquidation will reduce costs for retailers while improving asset recovery values and the speed at which tablets are returned back into consumers' hands. This increased efficiency has the added value of making retailers' extended warranty plans more economically viable. Furthermore, the regional model described here will also fulfill OEM's requirement to minimize costs and deliver superior customer services as measured by repair turn-around time.

VENDOR SELECTION CRITERIA

We surveyed a cross-section of OEMs, Retailers and Wireless Carriers regarding their needs and attitudes towards the tablet repair market. The majority of respondents surveyed indicated that their customers are required to mail in defective units to an Authorized 3rd Party Service Provider (3PSP). Many of these 3SPSs are managed by OEMs and/or their subsidiaries, speaking to the OEM lock on the still-nascent tablet repair industry.

Survey respondents spoke to a number of criteria important in choosing and sticking with a vendor. The most important factors in choosing a vendor, ranked in order of priority, are:

- QUALITY OF REPAIRS

- COMMITMENT TO QUALITY METRICS

- ABILITY TO MEET TURNAROUND TIME (TAT) REQUIREMENTS (2-5 DAYS)

- WILLING TO INVEST IN TRAINING

- QUALITY & THOROUGHNESS OF REPORTS

- QUALITY OF IT INFRASTRUCTURE

Clearly repair quality is paramount in vendor selection. Qualified vendors must be able to meet OEM specifications and otherwise offer consistently high quality test and repair services. Long-standing, standardized processes across a vendor's network demonstrate commitment to quality metrics. With turnaround time being ranked second in priority, demonstrated high-velocity forward and reverse logistics is also a key criterion in choosing a vendor. Vendors who operate multiple facilities in high-volume regions and those who offer innovative time-saving services, such as in-field warranty services, excel at meeting and surpassing TAT requirements at scale.

Also indicated are the quality of reports and IT infrastructure. Tablets have become highly complex pieces of equipment, and a vendor's diagnostic system must be able to test many components, sensors and functions (e.g. Microphone and speaker, Cellular and WiFi connectivity, Accelerometer / Gyroscope / Magnetometer, and so on). The vendor must also offer a thorough and reliable methodology for reporting results in both high-level "Pass/Fail" and granular detail.

VENDOR SPOTLIGHT – CTDI

One vendor whom we've worked with, and regard as a highly capable and qualified service provider, is CTDI. This company excels in all areas of tablet diagnosis and repair, including the specific factors identified as critical by our survey respondents. CTDI brings 39 years of technical expertise, innovation in service models, and global testing and repair capabilities to the market. They have the ability to test more than 75,000 unique model types and offer the most comprehensive repair service portfolio in the world.

CTDI's NightHawk Test System, an advanced multi-unit tablet tester is a prime example of the company's commitment to technological innovation in a rapidly evolving sector. NightHawk can test 10 tablets simultaneously, leveraging innovations like front-loading tablet trays that greatly increase test capacity and daily productivity. With NightHawk, CTDI has the flexibility to keep pace with the latest tablet models, operating systems and APIs while also leveraging extreme efficiencies that keep reverse logistics velocities high. NightHawk performs fully functional testing of tablets utilizing CTDI designed and developed Apps tailored to access and utilize the Tablet API's.

The purpose of these applications is to simulate the end-users tablet experience and will test the following tablet functionality:

- Connectivity
- Multimedia

- Battery
- Touchscreen, Buttons, LEDs
- Sensors
- System Information

CTDI's ability to offer fast, high quality screening and diagnosis of multiple brands and models of tablet devices couples with their OEM authorized repair and excess asset management services to provide a comprehensive portfolio of service offerings. CTDI employs over 350 engineers to develop testing for a variety of OEM technologies, ensuring ongoing innovation to keep pace with this fast-moving market.

CTDI has a network of 69 facilities operating in 15 countries, with 48 facilities in the US alone. This mature, global network allows CTDI to offer high velocity reverse logistics by cutting down on transit time to and from their facilities. The quality of CTDI's infrastructure is outstanding, and efficiencies are further increased by way of CTDI's innovative, scalable Web-based testing technology. The company's proprietary Warehouse Management System (WMS) and eBusiness tools also allow customers to enter and track orders online 24/7. In summary, CTDIs' state of the art technology, world class processes, and global presence allow for high speed, high quality in region repairs which supports customers' demands for immediate or very short interval repair or replacement as well as meets the OEMs' requirements to minimize costs.

SUMMARY AND CALL TO ACTION
The rapid growth of the tablet computer industry has created a demand for a highly efficient approach to diagnosing and repairing returned units. Our research findings show that a majority of tablet computer

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Optoro Raises $50 Million in Funding Round Led by Kleiner Perkins Caufield & Byers
2014 December 10-Optoro Inc., a cloud-based technology company that enables retailers and manufacturers to increase their revenue from returned and excess inventory, today announced that it has closed a $50 million Series C funding. The funding round was led by Kleiner Perkins Caufield & Byers (KPCB) joined by Generation Investment Management (Generation) with participation from existing investors Revolution Growth, Grotech Ventures and SWaN & Legend Venture Partners. KPCB Partner Daniel Oros will join the board.
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9 December 2014 – Chances are high that you'll be getting or giving new electronics this holiday season: an iPhone upgrade for mum perhaps, or maybe a new Windows 8 ultrabook. Device upgrades have become increasingly frequent for many of us. Unfortunately, too many people give virtually no thought to what becomes of all these discarded gadgets.
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WasteCare Installs Battery Sorting System
8 December 2014 – WasteCare, co-owner of BatteryBack, which is one of the United Kingdoms largest compliance schemes for household batteries, is partnering with Refind Technologies to install an automatic system for sorting discarded batteries.
Full Article

suppliers (e.g., OEMs, Retailers, and Carriers) waste time and money due to multiple issues in the current flow of reverse logistics. Specifically, too many devices are needlessly returned to the manufacturers' 3PSP where time and effort is spent on testing the devices instead of screening via phone or at the retailer, and too many devices have to travel too far a distance for quality diagnosis and repair.

Market research surveys confirm that the tablet market will continue to expand by virtually all measures, including units shipped and install base. A byproduct of this growth will be the continued, increased need for in- and out of warranty repair. Our survey of decision makers across the OEM, Retail and Wireless Carrier segment confirmed the need for quality screen and repair service vendors, and also identified the key criteria involved in selecting and renewing relationships with vendors. Factors ranking high on the list of criteria included quality of repairs, ability to meet turnaround time, willingness to invest in R&D and training, and quality of reports and IT infrastructure. The primary methods discussed to alleviate such inefficiencies are: improved front-end diagnostics, moving the return & repair facilities closer to the customer/retailer through a regional service model, and, perhaps most importantly,

optimized test and screening that forgoes the costs and slow speeds associated with standard testing.

As analyzed in the vendor spotlight, CTDI is one vendor who meets all of these criteria with their automated multi-unit test systems and deep roster of highly trained technicians and innovative engineering talent. CTDI is also uniquely positioned to leverage their global network of repair facilities, technical competencies, and logistics support services to increase reverse logistics velocities, add value, and drive costs down. Given the huge potential for cost savings, risk protection, and revenue gains, companies should seriously consider building a business case and ROI justification for investment in solution such as the one offered by CTDI.

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 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.

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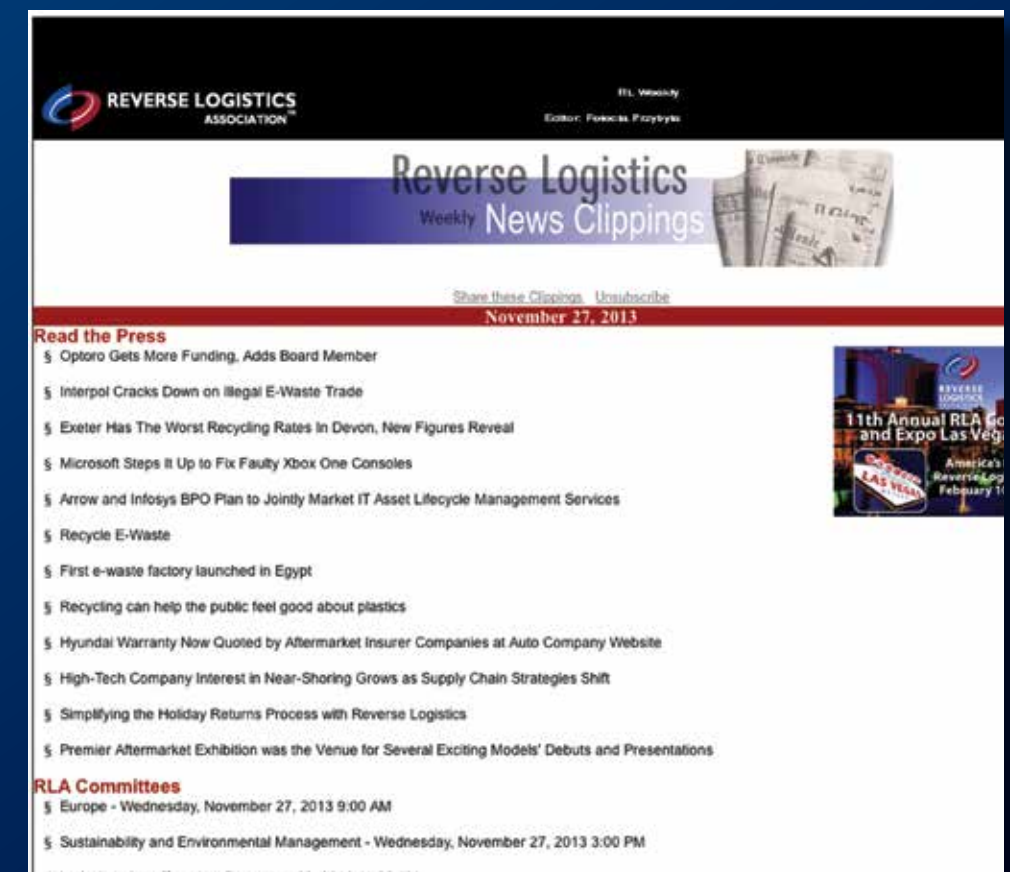
Effectively Managing The Reverse Logistics Process

By Pól Sweeney, CTO of Airclic (Recently Acquired By Descartes)

Customers are much more likely to make purchases online if they know that they have the flexibility to make a return if they need to; in fact, it has been estimated that customers return up a quarter of the garments they purchase for one reason or another. If a retailer has a complex return and refund policy, more and more consumers will be turned off from shopping on the site in the first place.

From the retailers' perspective, however, handling returns – often referred to as reverse logistics – is an even bigger problem than making sure that the return process is efficient for customers. One of the biggest logistical headaches they can face is the shipping and processing of returns. Because of the rising cost and complexity of managing returns, some retailers are starting to 'blacklist' consumers who make too many returns (such as 10-15 items over a six month span) and either refuse to take orders from them, or charge them a different rate for delivery as a deterrent.

But how can the reverse logistics be improved? What are the challenges and how can the process be streamlined to both enhance customer experience and efficiently, and cost-effectively aggregate packages back up the supply chain?

Logistics—An Infrastructure Set Up To Go Outbound

Returning products of any kind creates difficulties in supply chains. Supply chains are planned in advance to go outbound – flowing from a central repository to an end point. When products are shipped, they typically flow from one or two large facilities, from where hundreds of thousands of orders are managed; a product is picked, labelled and loaded onto a truck in a controlled environment. These shipping scenarios typically provide good density and utilization of warehouse resources.

In the cases of returns, reverse logistics processes are used—and it is most often an ad-hoc process to manage orders (orders that are, by nature, not expected). In these cases, there is no longer one central location from where the product is sourced – but thousands of potential starting locations, based on customer locations. For retailers, getting returned product back into stock, without it being damaged (if it was being returned simply as an unwanted item) or going missing is the goal.

In these return situations, single items can be shipped back from each of the disparate customer sites; which means that returns cannot easily be managed through a dedicated process – different processes will need to be used, items shipped and reshipped until reaching their upstream destination, or trucks being sent to directly pick up small orders. While some companies will try to coordinate return pick ups in trucks that have spare capacity, in general, reverse logistics doesn't lend itself to an efficient use of resources.

Further Challenges

When an order is placed, it is assigned an order/tracking number which is encoded on the product through a barcode or RFID tag. The unique ID can be scanned, and used to track an order at all points along the route to its destination. When a product is returned, however, it doesn't have a natural identity.

Companies can use one of a few methodologies to get a unique ID onto the item being returned:

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1. The consumer is asked to print a return label that can be affixed to the product in the event of a return. This label will serve as an identifier for the product as it makes its way back through the supply chain. There is room for error with this method, however, as the consumer may not fully remove or cover the barcode used during the outbound shipping process, which could lead to confusion during the package's next round of shipping.

2. If a company has the inclination that a consumer may return a product based on triggers (i.e. ordering several of the same item in different sizes/colors, past behavior), they may include a pre-addressed return bag in the delivery package. With a return address and identifier on the item, this is a more controlled/managed way to make a return get back to the company.

3. Items can be returned by the consumer to a 'local' collection point or collected from their home or business. The problem here is consumers making a return are not likely to prioritize being available for a delivery truck to facilitate it – and it is very costly.

In addition, another challenge is to ensure that returns are classified properly. There needs to be delineation between the return of a damaged or refused item, versus one that is simply unwanted and can be re-sold/re-stocked.

As returns are collected, they are put into a container or pallet with other returns and are wrapped up, secured and sent back up the supply chain. These returns could be going back to a single supplier, or

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January 6-9, 2015

Reverse Logistics Workshops: 2015 International CES
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February 9, 2015

RLA @ Last Mile Advantage: Kona Kai 2015
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RLA Conference & Expo: Paris 2015
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If you are working in the reverse logistics field with three or more years of experience, then you are ready to take the Reverse Logistics Association's preparation course for the Reverse Logistics Professional Certification Examination. The course is 8 hours of training in the foundational principles of reverse logistics and the business practices that lead to world-class performance. The course is highly interactive in an experiential-learning format that maximizes your training so that you can immediately apply what you have learned on the job. After passing the examination, you will be qualified to put "RLP" after your name distinguishing you are a highly-trained professional in reverse logistics.

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process. As this is done, an email to the customer can be automatically generated, letting them know that the process has started. Providing good tracking information on returns for the consumer is all part of enhancing their quality of experience, just as tracking the delivery is.

5. Increase the use of collection points—handle returns in batches at sites where consumers can drop them off, like convenience stores. Setting up locations in high traffic areas near major towns or cities may actually lower your reverse logistics costs.

Conclusion

It is a challenge to account for and predict the unknown, but with today's technology, reverse logistics processes can be streamlined by putting the right checks and balances in place. One mechanism for doing so is mobile proof of delivery software that can help track and rectify returns in real-time – and ensure that consumers and businesses alike have a clear process to follow when making returns.

Mr. Sweeney brings 15 years of experience in the mobile service and supply chain software industry to Airclic (recently acquired by Descartes). As the company's Chief Technology Officer, he is responsible for overall product and technology strategy, product management, and product development.

Previously, Mr. Sweeney was CTO for Trimble Navigation (@Road) Field Service Division from 2005 to 2007. From the early 2000s, he was the CTO for Vidus, a specialist mobility and field scheduling company.

Mr. Sweeney's earlier experience includes serving as the Chief Architect for British Telecom's (BT) Workforce Management and Scheduling project during the 1990s. He became General Manager of BT's Work Management Development Unit, where his vision surrounding the significant market opportunity for the technology led him to develop the business plan for BT Brightstar's (BT's incubation unit) investments in advanced planning and scheduling solutions.

Mr. Sweeney holds a Bachelor of Engineering degree from University College, Dublin, where he graduated with honors.

to multiple suppliers. Carriers need to ensure that items are routed to the correct suppliers to expedite the return/customer reimbursement process.

Improving Reverse Logistics

It is clear that a lot of thought and coordination needs to be applied to managing the reverse logistics process.

With that in mind, the following are some practices companies can consider implementing to improve – and ease – the pain of the reverse logistics processes:

1. Share electronic data between stakeholders in the supply chain to ensure that they know a return is on its way and have the necessary data to assign IDs to it.
2. Validate the ID of the item when it is picked up and obtain the state of the item by taking images of it, showing the condition the item was picked up in and that it is in fact the same item.
3. Leverage resources already in the area where returns need to be made – optimize your shipping and distribution routes to also include returns, so that your vehicles can pick up returns while minimizing the miles spent to get there.
4. Scan return items when they are being processed at the depot to ensure that they are put on the right pallet and correct truck. This also helps assist with reconciliation and validation throughout the return

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Using Your Supply Chain As A Competitive Weapon

A Practitioner's Guide to Supply Chain Management
By: Dr. Tony Vercillo

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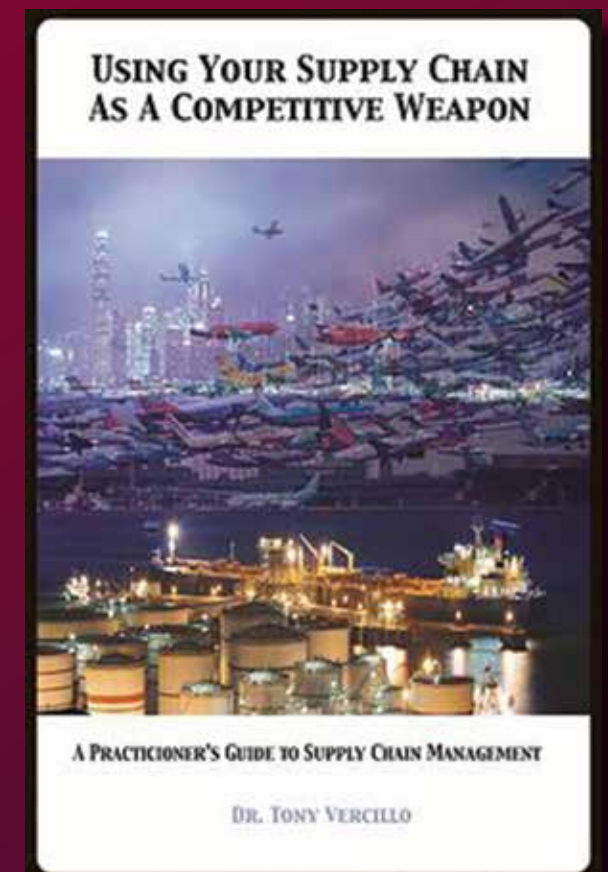
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What is it all about
An in-depth summary of Using your Supply Chain as a Competitive Weapon: A practitioner's Guide to Supply Chain Management

Creating a Sustainable Supply Chain Is Good for the Environment & Your Company

by Adam Robinson, Cerasis

"Going Green" carries more clout these days as companies realize the blend of business with eco-friendly initiatives involves more than social responsibility. In today's ecologically sensitive consumer environment, going green also makes good business sense. See below the rest of this post to see the full sustainable supply chain inforgraphic.

But companies are finding that going green requires more than a simple change in marketing or sloganeering. Meticulous consumers and a host of experts, analysts and pundits are combining to truthfully evaluate which companies are making serious efforts to go green — beyond their advertising claims.

One area in which businesses can make meaningful progress toward creating a sustainable supply chain. Traditionally, businesses seeking to optimize their supply chains have focused on moving product and reducing inefficiencies in the supply chain — not on all the other things that can be done to positively impact the environment.

However, as companies begin to evaluate and change their environmental thinking, they need to look closely at their supply chains as a source of eco-value. If properly planned and executed, "greening" the supply chain offers a win-win situation where companies can put a "W" in the both the operations and environment column.

Blend Business with Environmental Responsibility

Environmental responsibility, in large part, involves mitigating the risks already affecting businesses today such as global warming and climate change, shortages of natural resources (i.e. energy, water, forests, etc), and shifts in consumer preferences.

In the book "From Green to Gold: How Smart Companies Use Environmental Strategy to Innovate, Create Value and Build Competitive Advantage," the authors highlight how companies can move into the vanguard of the green movement, and it's a great reference to have a mindset of the execution of your strategy to have a sustainable supply chain.

Some of the largest, most recognized brands have made the correlation between operations and the environment within their supply chains:

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- **Wal-Mart** — In Canada, the company switched some of its shipping crates from cardboard to plastic, which allowed the crates to be used approximately 60 times instead of once. The company estimates it saved $4.5 million from the switch and reduced waste by 1,400 tons.
- **Staples** — The office superstore installed skylights in its distribution centers and now uses dual-speed drive motors on conveyor systems. The company has reduced per-square-foot electricity by 15 percent.
- **REI** — The outdoor gear retailer is taking steps to make it easier for its supply chain to more quickly and easily identify green products. The Outdoor Industry Association's Eco-Working Group brings together more than 40 outdoor brands, supply chain partners and other stakeholders to create a framework to measure, report and improve the environmental impact of their products.

Apply Technology to the Problem

On a more granular level, the environmental risks already are and will continue to directly impact supply chains in the areas of product design, materials selection, sourcing, etc.; product movement; facilities management; customer retention; and supplier collaboration. In fact, there are so many different facets to building a greener supply chain that it's often difficult to determine where to start.

Before investing heavily in redesigning products and facilities, there can be great benefits to starting within the four walls, applying the latest innovations in inventory, order, transportation and distribution management technologies as the foundation for green initiatives.

The following are examples of how real-world technology applications can combine traditional supply chain strategies with an eco-friendly approach to produce a type of two-fold benefit aimed at both the business bottom line and the health of the environment:

- **Inventory Management** — Companies can optimize order frequencies with replenishment optimization tools that examine the economics of various ordering cadences. For example, by moving to an every-other-day shipment schedule, a big-box retailer, traditionally receiving daily deliveries of inventory, has the potential to realize both fuel and labor savings while reducing emissions by as much as 40 percent.
- **Order Management** — With the right technology, companies can dynamically re-route inventory being received at transload facilities. Take an outdoor gear company receiving shipments in Long Beach, Calif., and sending products through a Houston distribution center before they're delivered to a Salt Lake City store location — a total distance of 3,100 miles. By delivering those same products directly to Salt Lake City from Long Beach, this company has the opportunity to reduce lead times and delivery miles by 77 percent which, in turn, adds up to fuel savings and reduced CO2 emissions.
- **Transportation Management** — Through in-depth transportation procurement solutions, companies can now prioritize shippers and carriers with standardized environmental factors. Based on new EPA data that assigns carbon ratings to shippers and carriers, companies can potentially leverage that information to make transportation procurement decisions — adding "least environmental impact" into priority considerations, along with "least cost" and "best service."
- **Distribution Management** — Companies can get smarter and greener about the way they pack goods. Through the latest innovations in distribution management technology, for example, an online retailer can optimize order packing via cubing algorithms which consider weight, volume, product dimensions, constraints, nesting, protection, etc. This retailer will more than likely reap the eco-benefits of reduced packaging requirements as well as a reduction of CO2 emissions by more effectively and efficiently packing products to maximize three-
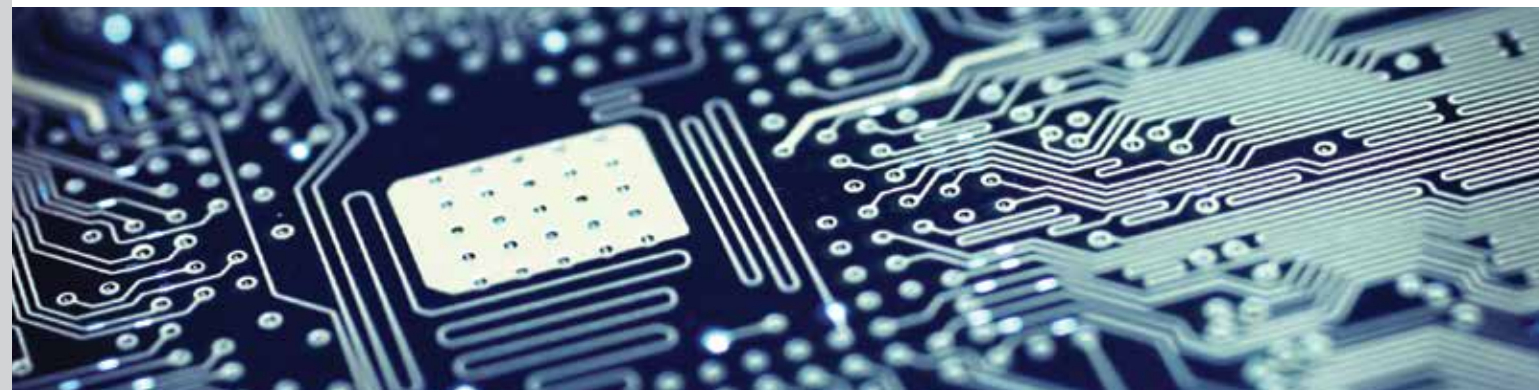
Adam Robinson oversees the overall marketing strategy for Cerasis including website development, social media and content marketing, trade show marketing, email campaigns, and webinar marketing. Mr. Robinson works with the business development department to create messaging that attracts the right decision makers, gaining inbound leads and increasing brand awareness all while shortening sales cycles, the time it takes to gain sales appointments and set proper sales and execution expectations.)

dimensional space within cases, pallets and trucks.

When evaluating each of these strategies, you'll obviously need to carefully consider the impact to your operations. Remember, there is no "one-size-fits-all" when it comes to supply chain optimization or sustainability initiatives. Each of these strategies has eco-benefits, but they also have trade-offs from an operational perspective. Once you ensure the change provides a positive impact to both the environment as well as your bottom line, then you'll achieve the desired win-win.

Take a Holistic Perspective on the Environment

As outlined above, functional areas within your supply chain exist that should warrant initial examination before beginning any sustainable supply chain program. You should, however, keep in mind that in order to truly lessen our businesses' impact on the environment, ultimately we must take a broad, holistic perspective of our supply chain — it is not a siloed problem.

As a supply chain professional, you have to measure the affects of any environmentally sensitive or compliant changes both upstream and downstream to determine the overall impact from an eco-business perspective. While tactical efficiencies can be gained within an organization by making changes to supply chain operations, often these changes push inefficiencies upstream to trading partners or downstream to end customers.

Protecting and preserving the environment requires global collaboration and long-term solutions. However, don't be deterred by the potentially complex and massive change involved with global collaboration. Companies can start now by taking a practical perspective on the technologies available to them that help increase efficiency. In many cases, that same technology can give supply chain professionals a green advantage at little to no extra cost.

In the end, it's simply about what makes good business sense.

Reverse Logistics Terminology

Industry Definition			Life Cycle Management
INDUSTRY	**TERMINOLOGY**		**After Purchase Life Cycle**
Apparel	Merchandise Returns	R E V E R S E L O G I S T I C S	• Customer Service (helpdesk)
Automotive & HD	Remanufacturing		• Depot Repair/ReMan

Consumer Products	After Market Supply Chain		• Service Logistics (Field Service)
			  – Transportation/Warehousing
			  – Spare Parts Management
			  – RMA Management
			  – Replacement Management

Furniture	Rebuilders/Refurb		• Refurbishment • End-of-life Manufacturing • Remanufacturing
Hospitality	Reader Board Shopping		• Fulfillment Services • IT Process Management
Military	Retrograde		• Recycling • Scrap/Waste Management • Gray/B Channel Management
Retail Grocery	Unsaleables		• Warranty Management • Asset Management/ITad - IT Asset Disposition
Space & Aviation	Obsolescence		• Sustainability/EPR - Extended Producer Responsibility
White Goods	Takebacks		• Environmental Resources

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Returning Thoughts

How to Setup Your 3PL Operations to Provide Reverse Logistics Services – Part 2

by Paul Rupnow

In Part 1 of this article for 3PL Warehouse operation, we started by Understanding Your Reverse Logistics Customer's Needs and Goals. We focused on understanding your 3PL client's needs to effectively handle returns from their customers/retailers AND to help them recover the highest possible value for their returned goods. In this Part 2 article we will expand on the processing, triage, dispositioning, reporting, data exchange, software technology and warehouse setup and layout to operate a Reverse Logistics and returns processing operation at a 3PL Third Party warehouse

The heart of Reverse Logistics processing is receiving. Successful Reverse Logistics requires more than just basic receiving, it requires Smart Receiving. This involves a pre-arranged and item specific workflow of receiving, assessing, sorting, put away and possibly some refurbishing. Two of the main goals of these activities, especially for 3PL clients with mid to high volume consumer goods, is to reduce cost (touches) and to speed turn-around time. Faster turn-around time and refurbishment means faster conversion of the returned inventory to cash. For a 3PL, this organized Smart Receiving workflow translates into excellent value added services for your clients.

Reverse Logistics Processing Activities – Receive, ASSESS, Sort, Put Away, Refurbish

The main activities in Returns processing are typically consist of activities such as: identify, receive, validate, visual assessment, sort, put away and sometimes unbox/de-trash, disassemble, test. At a 3PL returns processing facility any detailed technical repair work is usually arranged and outsourced to a specialized partner provided or coordinated by your client.

RECEIVE and ASSESS– As stated earlier, the heart of Reverse Logistics processing is receiving. In forward logistics, this process is 2 steps: receive, put away. Some Reverse Logistics can be easy like that too but often Reverse Logistics receiving involves more, typically: receive, ASSESS, put away. The added assessment step is needed because the main goal when processing returns is usually to recover value. But since we do not know if these goods are in perfect condition, we must assess or inspect them. In addition to the assessment step, you may wish to combine other processing activities or data gathering steps to avoid touching or handling the product again later. We want to use the assessment knowledge and data gathered to determine best next steps for a workflow that will recover the highest value for that item.

Data gathered at the time of the Receive steps is also passed to your client and utilized for the issuance of a Credit, exchange or repair, so care is required to ensure the item and condition are acceptable, that the returns is valid for RMA credit or warranty replacement, or if a credit discount needs to be applied or the receipt credit rejected.

SORT and PUT AWAY – based on the data gathered in the Receive and Assess steps, the next step is to direct the item to the best next activity based on the condition and the data

known or gathered. From the data gathered and planned workflow for the item you determine a Disposition – this is the put away location, but is also often the first step in a stream or workflow that is the best place to store the unit on the route to recapture the highest value. This location/step maybe work in process (WIP) step or it may be a "finished goods" location since no further activities are required or possible for these items to achieve a higher value. These "finished goods" locations/steps may be referred to as: "as is", Beyond Economic Repair (BER) or they may be scrap.

REFURBISH – sometimes the workflow will also include activities to convert the item to a better state - minor changes to increase value – such as: repackage, test, clean. Many of these activities can be easily provided by the 3PL as value added services and often these small activities can mean significant gains in recapture or re-sell value of the products.

Warehouse Layout
It is helpful to have a separate Receiving dock or area for inbound Reverse Logistics goods. It is also helpful to keep the unprocessed and partly processed returns separate from your regular WMS finished goods. There are two layout considerations when setting up for processing returns. Physical layout to keep items separated on the warehouse floor and logical to keep a separate virtual warehouse in your systems for Revere Logistics processing. Once the units have been processed through Receive, Assess, Sort and Put Away, then the "finished goods" can be moved to your traditional WMS warehouse since the WMS is best suited for Finished Goods processing.

Reverse Logistics Software Systems
It is very helpful to utilize software to help you effectively and efficiently process returns to fill the gaps that most WMS systems do not handle effectively. Some key areas of consideration are:

SMART RECEIVE – utilizing software to help you Receive, Assess, sort, put away and refurbish help you manage your processing, labor and activities. Software with the ability to create item special workflows, and to track and monitor

those activities can be extremely helpful. You want to "Smart Receive" – to enhance your ability and direct your users to quickly and accurately follow a special pre-determined workflow for each item to receive, assess, sort, put away and refurbish activities based on the different conditions you will be receiving the items. The software should allow a business user to easy and quickly monitor and change the workflows, rules or activity setup to minimize Warehouse user decisions. For mid to high volume environments you will want easy software that utilized handheld devices and is easy for the warehouse staff to learn and use.

Visibility - Real time visibility and reports of the location of each item and also the stage of production of each item in the warehouse as well as the warehouse age of the inventory. A history of the activities performed on each unit is also essential to monitor and manage optimal workflow, productivity and production time and cost.

Reporting – in addition to the real time visibility, reports that follow a unit through entire process, receipts, activity, dispositions help keep your team and your clients up to date with your processing balances and activity.

Data Exchange – As with your WMS, you need the ability to share and exchange incoming and outgoing data with other systems such as your WMS, your client's ERP and CRM in multiple formats such as EDI, flat files, XML or web services.

Reverse Logistics Services – a 3PL value added Opportunity
Part 1 and 2 of this article should give you a deeper understand of the set up required for a 3PL to offer Reverse Logistics services for their clients. Many 3PLs have avoided processing returns in the past, but these articles should have provided you with a better understanding of what it takes to set up your 3PL warehouse for this new value added opportunity.

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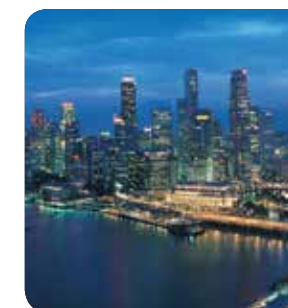REVERSE LOGISTICS ASSOCIATION WORKSHOPS

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