A SOLUTION WHITE PAPER

Best Practices in Return, Refurbishment and Repair 2012



TABLE OF CONTENTS

Executive Summary	2
Best-in-Class Performance	2
Competitive Maturity Assessment	2
Required Actions	2
Chapter One: Benchmarking the Best-in-Class	3
Make the Return to Profitability	3
The Maturity Class Framework	4
The Best-in-Class PACE Model	6
Best-in-Class Strategies	6
Chapter Two: Benchmarking Requirements for Success	7
Competitive Assessment	7
Capabilities and Enablers	8
Chapter Three: Required Actions	13
Laggard Steps to Success	13
Industry Average Steps to Success	13
Best-in-Class Steps to Success	13
Aberdeen Insights – Summary	14
Appendix A: Research Methodology	15
Appendix B: Related Aberdeen Research	16

EXECUTIVE SUMMARY

The life of a product and part does not have to end when failure occurs. In this current economy, parts and products are being stretched further and further to maximize use, and thus repair becomes essential to keep these assets productive. Organizations are finding that if managed correctly, the repair and returns operations can become a very profitable side of the business; propping up ever shrinking product margins. On average, service organizations surveyed by Aberdeen repair just under half of all returned parts / products (47%), and thus it is integral to the viability and profitability of the organization that parts are efficiently returned, repaired, refurbished and eventually resold if value can be reclaimed. Best-in-Class organizations have equipped their service operations to maximize the opportunity of service parts / products.

BEST-IN-CLASS PERFORMANCE

In January and February 2012, Aberdeen Group surveyed 157 service organizations. Those defined as Best-in-Class exhibited the following:

- 4.9% average decrease in total repair / refurbishment costs over the previous 12 months (4.8% average increase among all others)
- 1.3% average decrease in cost per Return Material Authorization (RMA) over the previous 12 months (0.3% average increase among all others)
- 72% average current performance in spare part fill rate (45% among all others)

COMPETITIVE MATURITY ASSESSMENT

Survey results show that the firms enjoying Best-in-Class performance shared several common characteristics, including:

- 86% more likely (89% vs. 48%) than all others to at least monthly measure return, repair and refurbishment productivity, profitability, and customer value
- 88% more likely (79% vs. 42%) than all others to standardize warranty / SLA covenants for refurbished products / parts
- 72% more likely (79% vs. 46%) to have a centralized database with customer and product information accessible to relevant stakeholders

REQUIRED ACTIONS

- Standardize return, refurbishment and repair processes
- Sell service and refurbished / repaired parts and products
- Provide visibility across the organization into repairs / returns



RESEARCH BENCHMARK

Aberdeen's Research Benchmarks provide an in-depth and comprehensive look into process, procedure, methodologies, and technologies with best practice identification and actionable recommendations

How Does Your Performance Compare to the Best-in-Class?



- Compare your processes
- Receive a free, personal PDF scorecard
- Benefit from custom recommendations to improve your performance, based on the research

Take the Assessment

Receive Your Free Scorecard

CHAPTER ONE: BENCHMARKING THE BEST-IN-CLASS

Make the Return to Profitability

"All hands on deck" is a mantra that brings to mind a team coming together to successfully accomplish a tough goal. Likewise in regard to the service operations, each component needs to pull together to solve a major problem facing all businesses - balancing profitability goals and customer expectations. The repair and return operations are not immune to these pressures; when a customer asset goes down the service organization must be ready to act to solve the issue efficiently to satisfy the customer need. In Aberdeen's February 2010 study on reverse logistics and repair (Reverse Logistics: Driving Improved Returns Directly to the Bottom Line), top performing organizations achieved a more than four-times greater decrease in year-over-year cost per Return Material Authorization (RMA) than all others (21% vs. 5%, respectively). These savings are quite substantial when coupled with the volume of parts being returned annually within manufacturing and service organizations. While cost-cutting and containment is a large piece of the equation in regard to the return and repair operations, the overall customer experience is greatly impacted by the efficient management of the return, refurbishment and repair operations (Figure 1).

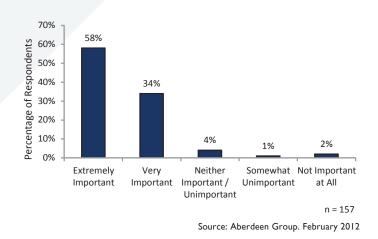


Figure 1: The Importance of Return, Refurbishment and Repair to the Customer

FAST FACTS

On average, what portions of returned parts/products repaired?

- √ Best-in-Class 54%
- $\sqrt{10}$ Industry Average 48%
- $\sqrt{\text{Laggards} 39\%}$

BEST-IN-CLASS CRITERIA

The following metrics were used to determine the Bestin-Class for Reverse Logistics: Driving Improved Returns Directly to the Bottom Line research:

- \checkmark Customer satisfaction rate
- √ Average days part return time
- \surd Year-over-year change in cost per RMA

Best-in-Class: top 20% of aggregate performance scorers

Industry Average: middle 50% of aggregate performance scorers

Laggards: bottom 30% of aggregate performance scorers

In Aberdeen's past Service Parts Logistics 2011: Driving Improved Service Performance via Tighter Integration research (June 2011), the top three pressures driving organizations to focus on better parts management were tied to: better customer service (56%), escalating cost concerns (40%) and revenue creation (15%). No longer can organizations solely look to service and parts management (i.e., return, refurbishment, repair, forecasting, planning) as a means to reduce cost. In order to be successful, companies must find ways to look at service and parts management as revenue as well as means to differentiate the level of service provided to customers.



The customer is an important part to the return, refurbishment and repair equation, and so Chief Service Officers (CSOs) need to also be keenly aware of the impact of these operations on profitability and efficiency. Nearly 90% of respondents (Figure 2) stated that efficiently managing the return, refurbishment and repair operations was very or extremely important to the operational and financial performance of the service organization. These repaired and refurbished parts / products are so important because they have the opportunity to be placed back into the service supply chain (or inventory) to resolve current customer needs, and thus relieve the burden of needing new parts, which often can be a costly proposition.

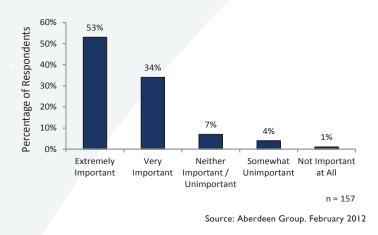


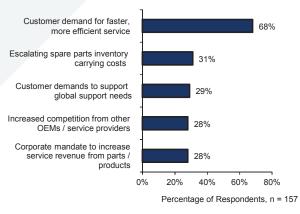
Figure 2: Financial and Operational Impact of Repair / Return

"Effectively managed return, refurbishment and repair operations impact: 1. Improved parts availability via refurbished supply 2. Improved administration for customer orders (we offer pricing discounts if core is returned)."

~ Manager, Supply Chain Mid-Size Computer Equipment Company

Customer Service - Speed to Resolution

In the context of improving return and repair operations, service organizations have two top concerns: the customer and profitability. Without one (the customer) the other will not be sustainable, and without profitability the service organization will not be around for its customers. From a customer's perspective, returns need to be faster and more efficient in order to provide a differentiated experience (Figure 3). As with most service practices, customer demands in repair, returns and refurbishment need to be balanced with profitability initiatives.



Note: Respondents asked to select top three. Source: Aberdeen Group, February 2012

Figure 3: Top Pressures Facing the Repair and Return Operations

"The return process is key to a good customer experience. We are not a manufacturer but self-fund our warranty period, so bad parts become critical to our cost containment and customer satisfaction. We deal with mechanical parts so the expectation is ultimate failure will occur. The key to world class customer service is doing what you say you will do, when you say you will do it. Show up on time and keep the customer in the loop with progress and expected resolution. It is simple in concept, but very difficult in execution.

- Jim Woodward, Manager Business Development - CCI Mechanical, Inc.

The Maturity Class Framework

Best-in-Class service organizations excel in a number of key metrics directly tied to customer- and profitability-focused pressures. These factors cannot be mutually exclusive for the service organization, as each has impact and influence on the viability of the overall business. Aberdeen's framework not only incorporates metrics tied to the customer and profitability but also change performance (Table 1).



Table 1: Top Performers Earn Best-in-Class Status

Definition of Maturity Class	Mean Class Performance
Best-in-Class: Top 20%of aggregate performance scorers	 91% Customer Satisfaction Rate 95% Service Level Agreement Compliance Rate 72% Spare Part Fill Rate 4.9% Decrease in Total Repair / Refurb Costs over the last 12 months
Industry Average: Middle 50% of aggregate performance scorers	 83% Customer Satisfaction Rate 51% Service Level Agreement Compliance Rate 53% Spare Part Fill Rate 2.2% Increase in Total Repair / Refurb Costs over the last 12 months
Laggard: Bottom 30% of aggregate performance scorers	 41% Customer Satisfaction Rate 20% Service Level Agreement Compliance Rate 29% Spare Part Fill Rate 9.3% Increase in Total Repair / Refurb Costs over the last 12 months

The Best-in-Class PACE Model

Table 2: The Best-in-Class PACE Framework

Aberdeen's PACE framework highlights the key strategies and internal capabilities leveraged by companies that achieve Best-in-Class performance through their particular acumen at succeeding in overcoming challenges and market pressures. This framework builds a roadmap for success and improvement for companies that wish to become top performers and emulate the capabilities and strategies of the Best-in-Class.

BEST-IN-CLASS CRITERIA

The following metrics were used to determine the Best-in-Class for State of Service Management: Forecast for 2012: $\sqrt{$ Service margin

- √ Customer satisfaction rate
- $\sqrt{\rm Customer}$ retention rate
- $\sqrt{\rm Year}\mbox{-}{\rm over}\mbox{-}{\rm year}$ performance in service revenue
- $\sqrt{\text{Year-over-year performance}}$

FAST FACTS

- \checkmark What percentage of annual product sales are refurbished or repaired 16%
- \surd Compared to last year, sales of refurbished assets / products will change by 5% over the next 12 months

"When we linked quality, engineering and service we were able to creatively find ways to maximize the value of returned parts. Using Kaizen and Pareto / root cause corrective action we were able to identify several work streams and activities that would could organization and improve"

~ Richard Lee, Vice President Logistics / Supply Chain, Avaya

Pressures	Actions	Capabilities	Enablers
Customer demand for faster, more efficient service	 Develop standardized processes and rules for the return, refurbishment and repair operations of parts and assets Collaborate with sales, marketing and pricing teams to facilitate refurbished parts / product sales 	 Frequent and on-going measurement of return, refurbishment and repair productivity, profitability, and customer value by service and management teams Ability to position and provision spares inventory according to SLA commitments Centralized database with customer and product information accessible to relevant stakeholders (management, operations, repair team) 	 Inventory Management System Service Parts Management Returns/Exchange Management System Warehouse Management System Customer Relationship Management Service Management Solution



5

Best-in-Class Strategies

Excellence is difficult to achieve if the right strategies are not ingrained in the service culture of the organization, as service (i.e., field, contact center, parts) is often the first or, worse yet, the last touch point with the customer. Best-in-Class organizations strive to incorporate better standardization and integration into processes that positively impact the return, refurbishment and repair operations (Table 3).

Table 3: Best-in-Class Strategies

Strategic Actions	Percentage of respondents, n = 157	
	Best-in-Class	All Others
Develop standardized processes and rules for the return, refurbishment and repair operations of parts and assets	64%	59%
Collaborate with sales, marketing and pricing teams to facilitate refurbished parts / product sales	39%	17%
Integrate return, refurbishment and repair operations to gain better visibility into overall part / product lifecycle	36%	24%
IFormalize planning and forecasting of part / product return needs and customer demands	32%	24%

Note: Respondents asked to select top three. Source: Aberdeen Group, February 2012

Standardization. Best-in-Class organizations understand that creating and sticking to defined and standardized processes helps provide a level of predictability. Variability in service demand can lead to parts shortages, dissatisfied customers due to unmet expectations, and inefficient service supply chains that cannot adjust / adapt to fluctuations in service demand. It is important that the service organization create a standard process for the customer in order to identify, retrieve, return and then fix parts and products to speed the resolution of an issue. As seen in previous Aberdeen research on Service Parts Logistics 2011 (June 2011), just under half of all Best-in-Class organizations (48%) surveyed standardized parts management processes throughout the organization in regard to service parts logistics. Top performing service organizations understand that standard processes are necessary to ensure that results / outputs can be expected and effectively managed.

Integration. Throughout Aberdeen's research, integration within the service operations has become an essential part of Best-in-Class operating procedures. Aberdeen's recent State of Service Management: Forecast for 2012 report (January 2012) showed that Best-in-Class organizations prioritize collaboration between



As service organizations look for new avenues to drive revenues from repaired and refurbished parts, appropriately parts become an important tool for this kind of financial opportunity. Selling service can be an awkward endeavor, as service organizations are searching for the line between delivering a valuable differentiated offering for free, versus finding a way to get customers to pay for it. Service organizations surveyed are just above average in regard to their ability to price service parts accurately to meet expectations (i.e., timely delivery of service, product quality) while also capturing the 'true' value of service (3.3. and 3.2, respectively on a scale of 1 to 5 with 1-poor and 5-excellent), as shown in Table 4.business reacts can make all the difference.

Table 4: The Perception of the Price on Service

Service Parts Pricing Capabilities / Competencies	Rating (1-Poor, 3-Average, 5-Excellent)
Accurately price service spare parts to meet	3.3
/ exceed customer expectations:	
Accurately price service spare parts to	3.2
match "true" value:	
Manage complex parts lists and policies:	3.2
Drive revenue from service parts resale:	3.0
Recover parts from customer:	2.9
Segment customers and markets:	2.9
Resell spare parts:	2.9

Past Aberdeen research on the State of Service Management: Forecast for 2012 (January 2012), showed that in ever increasingly competitive market service revenue was the top goal for 2012 (25% of respondents, n=215). Effective service parts management and the ability to price parts accurately are integral in order to reach this revenue initiative. Furthermore, Best-in-Class organizations stated that if they could increase parts sales by 10% they would be able to increase service revenue by 6% annually. As CSOs continue to search for new revenue streams due to shrinking margins, accurately pricing parts to maximize revenue streams is integral to success in 2012 and beyond. The value of service parts / products to the customer and the company is too high to not focus on the potential gains to profitability and customer satisfaction.



service and sales, marketing, human resources, manufacturing and engineering as it pertains to performance data, customer feedback and the development of customer management workflows. In regard to return, refurbishment and repair, over a third of Best-in-Class organizations foster an environment of collaboration and integration to provide increased visibility and efficiency into parts and products (39% and 36%, respectively). Linking the entire company together with service data and insight helps enable the organization to leverage customer data to improve not only service, but also the part, product, marketing and the overall experience.

Service organizations should be concerned with how and when products and parts are returned, as this is difficult to control, but they must have standard systems in place, and visibility across the organization to all of the varieties of returns in order to diagnose next steps and effectively satisfy customers.

In the next chapter, we will see what the top performers are doing to achieve these gains.

CHAPTER TWO: BENCHMARKING REQUIREMENTS FOR SUCCESS

All components of service operations must and should be viewed as strategic, as opposed to simply a cost of doing business, as these processes impact the customer and the service organization's profitability. No longer is the view of the profit-centric service organization a mystery, but ensuring that revenue goals of the organization and customer goals are aligned to deliver better service is integral to Best-in-Class performance. The return, refurbishment and repair operations cannot be left out of the discussion, and can be a very important driver for this new level of service differentiation.

Competitive Assessment

Aberdeen Group analyzed the aggregate metrics of surveyed companies to determine whether their performance ranked as Best-in-Class, Industry Average, or Laggard. In addition to having common performance levels (Table 2), each class also shared characteristics in five key categories: (1) process (the approaches taken to execute daily service operations in regard to the repair, refurbishment and return operations of parts and products); (2) organization (corporate focus and collaboration among stakeholders in regard to repair, refurbishment and return); (3) knowledge management (contextualizing data and exposing it to key stakeholders); (4) technology (the identification and selection of the appropriate tools and the effective deployment of those tools in regard to part / product repair, refurbishment and return processes); and (5) performance management (the ability of the organization to measure its results to improve its business tied to service operations). These key indicators of success (identified in Table 5) help formulate a clearer picture of best practices, and directly correlate with Best-in-Class performance across the key metrics.



CASE STUDY – AVAYA

Avaya is a large North American telecommunications solutions company with operations globally. The company has 200+ stocking locations around the globe, processes 140K+ Return Material Authorizations (RMAs), and ships / receives 305K+ parts or products annually. In 2011, Avaya was challenged in three main areas that impacted the customer and profitability:

- The company had too many different suppliers to efficiently monitor and manage
- Costs associated with service were higher than the organization wanted
- There was room to improve in regard to key customerand operational-facing metrics (i.e., timely return of parts/products by field, unknown inventory returned, backorders)

As a result of these challenges, Avaya looked to re-evaluate its service operations to find ways that it could better service its customers while also drive improved operational efficiencies.

Therefore, in early 2011 Avaya began to tackle each of these challenges with tools and programs to transform the service organization. The company shrunk its number of suppliers through consolidation, and went from multiple suppliers to having just two key partners which managed approximately 80% of its repairs. As the organization supports equipment in the field, its tight relationship with these two partners enabled a heightened level of expertise and trust as compared to having multiple suppliers that are less familiar with the company's support needs.

To confront the challenges of cost containment and improvements to customer-facing KPIs, Avaya implemented an on-going program to link cost, service and guality. Through its Lean Kaizen programs, Avaya has been able to reduce its Dead on Arrival (DOA) rate down to below 1% for the 2,000+ SKUs its manages. The company has also been able to implement 'root cause' analysis into its service operations and has been able to identify efficiencies that have resulted in a 97.3% on-time delivery rate. Through initiatives like the "perfect week," where the service team is empowered to find creative ways to solve difficult problems, the company was able to show a reduction in back orders from 2,000+ to less than a hundred. As both the service team and management saw the 'fruits of their labor.' the company has re-evaluated long-standing metric goals to better align them with performance and customer needs.

Table 5: Key Indicators of Success

	Best-in-Class	Average	Laggards	
	Accurately price service spare parts to meet / exceed customer expectations:			
	71%	34%	30%	
Process	On-going (i.e., monthly, quarterly meetings) collaboration between repair engineers and service / design teams			
	61%	49%	38%	
	Standardized warranty / SLA covenants for refurbished products / parts			
	79%	49%	30%	
Organization	Technicians have required skills set to execute repair operations in accordance with Service Level Agreements (SLAs) and regulations			
	64%	56%	43%	
	Established sales and distribution teams in place for refurbished parts / products			
	43%	37%	26%	
	Centralized database with customer and product information accessible to relevant stakeholders			
Knowledge	79%	54%	32%	
	Customer- and product-specific returns and repair data is captured and analyzed over time and is systematically (i.e., weekly, monthly) shared with other business teams (e.g., design, manufacturing)			
	71%	40%	23%	
Technology	Automated Repair, Refurbishment and Return Processes			
	- Return Operations: 57%	- Return Operations: 35%	- Return Operations: 28%	
	- Repair Operations: 54%	- Repair Operations: 30%	- Repair Operations: 21%	
	- Refurbishment Operations: 36%	 Refurbishment Operations: 21% Asset 	 Refurbishment Operations: 17% Asset 	
		- Asset Disposal: 17%	- Asset Disposal: 11%	
	Frequent measurement of parts / products productivity, profitability, and customer value by service			
Performance	89%	51%	43%	
	Frequently test repair products to improve product quality			
	61%	50%	28%	

Source: Aberdeen Group, February 2012

Capabilities and Enablers

To support key Best-in-Class strategies of visibility and integration, service organizations must enable their internal teams and external partners with the information and resources to effectively manage returns and repairs.

Process

Standardized processes lead to (more) standard results in regard to returns and repairs. That may be a bit of an overstatement, but service organizations look to create a level of



CASE STUDY - AVAYA (CONTINUED)

As Avaya moves along its service path, it will continue to use Lean Kaizen processes to identify and implement tools / projects, technology enhancements and lead from management example to create an excellent customer experience. The company continues to strive for the "perfect week," with 100% on-time fulfillment, 99.5% delivery in the network, 0 DOA and 0 back orders. This fervent culture of service perfection has been led by management, and Avaya looks to reach this level of service in 2012 and beyond.

FAST FACTS

Where do your organization's repair operations occur (process and /or completed): √ Repair depot - 42% √ Customer site - 27% √ Service organization's site - 21% √ In the field (excl. customer site) - 9% √ Other - 1%

""Effectively managing the return, refurbishment and repair operations is very important. A successful, timely and smooth pick-up of a product gives a positive impact to the customers who are then more likely to continue business with us. In case of a contract upgrade to a more recent machine, a pickup wrongly managed from a customer site (delayed, disrupting, unprofessional carrier, inconsistent collection) can annoy the customer to the point he will cancel his purchase order for a new machine and ruin all subsequent business with that customer. It is perceived by the customers as a service."

~ Director Supply Chain Integration, Telecommunications Equipment Comp

predictability and stability into processes in order to manage the volatile nature of service demand. Best-in-Class organizations are almost twice as likely as all others to have standardized warranty and SLA covenants for refurbished products and parts (79% vs. 42%, respectively).

In order to meet and set appropriate customer expectations, the service organization needs to define return commitments. Best-in-Class organizations are more than twice as likely as all others to standardize definitions of return commitments in service contracts (71% vs. 32%, respectively). Two major challenges to the service organization in regard to return of parts / products are: (a) the timely return of these assets and (b) no fault found returns (Figure 4). Without standard processes and accountability for the return of parts / products, delays and bottlenecks in the process will multiply ultimately impacting service delivery to the customer.

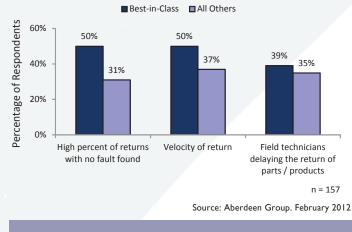


Figure 4: Top Challenges to Efficient Return and Repair

In order to effectively manage return and repair processes within the organization, it is integral to link the field with other service operations (i.e., repair depot, parts management). Without the timely return of parts and product from the field the ability to deliver on standard SLAs to the customer will be hindered. In this regard more organizations need to look to incent, and if necessary penalize, their field workforce for the timely and efficient delivery of parts and products to the repair depot so these valuable assets can be repaired and placed back into the service chain. Currently, just over a third of Bestin-Class organizations incent their field service teams on the timely return of parts and less a third on the efficient return of parts to the repair depot (39% and 32%, respectively). Service organizations must foster good behaviors and ensure that parts / product get to the next step in the return, refurbishment and repair process as quickly and efficiently as possible to ensure that SLAs can be met / exceeded and gains to profitability can be reached.

Organization

As shown earlier in Table 3, a top strategy for Best-in-Class organizations is ensuring that teams across the organization collaborate to facilitate increased sales of refurbished and repaired parts and products. In order to facilitate this or any level of collaboration, service organizations must develop an environment and culture that promotes the exchange of information and knowledge. Collaboration across the organization is important in regard to leveraging the valuable part / product / customer data that is captured from a return or repair to improve quality of service and asset.



In Aberdeen's Mobility research (Field Service 2011: Mobility and the Extension of the Service Enterprise, July 2011), the top strategic action for top performing organizations was to ensure the field tech was equipped with the right tools (55% of Best-in-Class), as it is difficult for a field service engineering professional to fix a problem the first time without the mobile tools at the ready. Similarly, without the right skills a task will not get done or at least it will not be completed efficiently. In regard to parts return and repair, Best-in-Class organizations are 25% more likely than all others to have technicians with the required skills set to execute repair operations in accordance with SLAs and regulations (64% Best-in-Class vs. 51% all others). Without having techs with the right skills the service organization will not be able to meet minimal SLAs and more so will not be able to exceed customer expectations.

Previous Aberdeen research in the State of Service Management (January 2012) showed that the top goal for Chief Service Officers (CSOs) in 2012 is growing revenue (25% of respondents). Despite not being the top goal specifically with regard to the repair, refurbishment and return organization, this nevertheless is a factor in the overall strategy of the service organization. As companies look to reach towards the revenue pie in regard to parts, the Best-in-Class have established dedicated sales and distribution teams to sell refurbished parts / products (43% vs. 33% for all others). These teams have oversight, knowledge and responsibility in regard to the value of refurbished parts / products and are best equipped to communicate that value to customers.

BEST-IN-CLASS CRITERIA

The following metrics were used to determine the Best-in-Class for Field Service 2011: Mobility and the Extension of the Service Enterprise:

- √ First-time fix rate
- √ Workforce utilization rate
- √ Year-over-year performance in productivity
- √ Year-over-year performance

Service organizations have begun to find that service is not solely delivered by internal teams, in that more often than not a partner network aids in the execution of service. As service, and exceptional service, becomes more complex - as a result of sophisticated parts / products specifications, diverse channel networks, global landscape - effectively managing a partner network and relationship is a concern that needs to be a key consideration in the return, refurbishment and repair operations. As seen earlier, the costs of storing parts / products are escalating and organizations are looking to outsourced partners to help alleviate some of this cost burden (Figure 5).

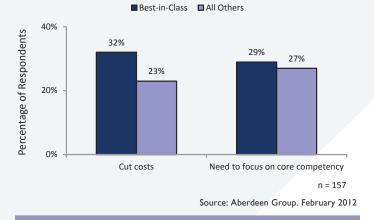


Figure 5: Reasons to Look to Outsourced Partnerships

Beyond the cost concern, service organizations, in an ever more competitive marketplace, understand the value of focusing on their core competencies and therefore have been willing to cede some of the return and repair operations to third parties, as long as these parties can meet a few requirements (Figure 6):

Close the loop. Creating a link through the entire return, . refurbishment and repair operations is integral to a successful operation, whether leveraging an outsourced partner or not. But with a reliance on third parties, service organizations have focused on ensuring that all relevant stakeholders have the right information to make real-time decisions, no matter at what end of the service chain they reside. Beyond closing the loop, outsourced partners must be able to integrate with already invested systems and solutions (Figure 6). Service organizations have a number of solutions in place (see sidebar) to manage a variety of processes related to the return and repair of service parts / products and an outsourced partner's ability to connect these systems and data will be a key proposition to help aid the service organization in giving up portions of these operations to focus on what it does best.

"We have linked our internal engineering team with our outsourced partner to ensure there is a level of oversight and added visibility into returns. Through this long term relationship we are able to continually improve product quality and the service experience."

~ Vince Silver, Global Service Parts Planning Manager Lexmark International

FAST FACTS

Tools currently leveraged by the Best-in-Class in support of return, refurbishment and repair operations: √ Inventory Management - 89%

- √ CRM 75%
- √ Service Management Solution 71%
- / Warehouse Management System 68%
- √ Service Parts Management 68%
- √ Returns / Exchange Management System 68%
- √ Depot Repair 64% Note: Respondents asked to select all that apply.

Experts must cover the globe. Almost a third of respondents list global support needs as a top pressure facing the return, refurbishment and repair operations (29%). As organizations look to partners to help deliver service through returns and repairs, the ability to provide a global footprint with a level of expertise is a key differentiator. When the service organization increases its focus on core competencies the burden of proof falls on the partner network to maintain a high level of service for the end customer.



Source: Aberdeen Group. February 2012

Figure 6: Challenges to an Outsourced Relationship

Knowledge Management

The Best-in-Class understand that information and data in silos does very little to link the service organization to other business units, and provide the insight necessary to efficiently manage the return and repair operations. A top strategy for these organizations to improve their repair performance is to ensure that collaboration and integration between various teams within the organization is built into the corporate culture. In order to enable this level of collaboration and integration, past Aberdeen research on Service Intelligence and Performance Management: Moving Beyond the Rearview Mirror (April 2011) showed that top performing firms not only capture service performance



data, but more importantly provide insight, analysis, and organization in order to leverage this valuable information to make performance-based business decisions. As return, refurbishment and repair data is captured and leveraged across management, operations and other business units (i.e., sales, marketing, and engineering), these teams are empowered to make intelligent decisions to improve the quality of the product as well as that of the service provided. For example, based on a given spike in returns for a particular defect, the service organization can look to the engineering team to tweak the part/product to ensure a problem is corrected.

Technology

For the repair and return operations it is difficult to efficiently manage parts and products without understanding what happens to products after the return. With less than a third of products repaired and returned to the same customer (27%), it is imperative for the service organization to have processes and technology to manage product and parts throughout the lifecycle (i.e., initial shipment, asset recovery, repair, return, replacement) (Table 6). The useful life of a product or part is being extended through repair operations to contain costs associated with a new purchase, and thus top performing organizations are finding new and better ways to maximize the value of products and parts.

What Happens When Product is Returned	Percentage of Respondents	
Repaired and returned to the same customer	27%	
Repaired but kept in inventory for resale (Replacement - Advance Exchange Model)	27%	
No fault or trouble found, issued back into the network	20%	
Re-flashed (e.g., all data wiped clean from product)	16%	
Liquidated	8%	

7%

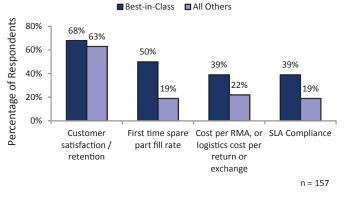
Table 6: Where Does It (Products) All Go?

Source: Aberdeen Group, February 2012

Stripped down for use of parts

The service parts supply chain can be complicated, especially when managing parts / products that have been returned by customers in a used condition. Best-in-Class service organizations look to increase automation of key return and repair processes in order to ensure that a level of high efficiency in process and execution is created and sustainable. Ensuring that return and repair processes are executed in a timely and efficient manner has a positive impact on service delivery, customer satisfaction and profitability. "Many of our products and spare parts use a refurbishment process to provide replacement products and spare parts to our customer. This allows us to maintain cost effective service actions, as well as providing timely service to our customers."

 Vince Silver, Global Service Parts Planning Manager Lexmark International



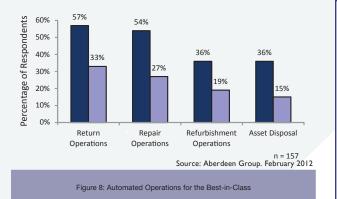
Source: Aberdeen Group. February 2012

Figure 7: KPIs that Drive the Best-in-Class

The Best-in-Class are more than twice as likely as all others to use analytical tools to improve the repair and return operations (75% vs. 30%, respectively). This point supports the fact that success doesn't solely come from measuring service operations, but tying these measurements to actual business strategy and improvements.

Across return, repair, refurbishment and disposal the Bestin-Class have implemented automated processes in order to ensure that parts and products are retrieved, returned, tested, repaired, put back into stock, disposed or returned to the customer. Automation helps speed up these many processes and adds standardization of results which provides consistency for service teams, management and customers. In regard to the return, repair, refurbishment and asset disposal operations Best-in-Class organizations are nearly twice as likely as all others to automate (Figure 8).





Automation alone will not heal all ills, but organizations that are able to link increased cross collaboration, standard processes and information management through automated processes / data flows can excel in key metrics tied to cost reduction, revenue generation and customer satisfaction. More efficient processes in regard to return, refurbishment and repair will enable the reduction of excess inventory in the service chain as 'good', usable product / parts can be identified earlier in the process and placed back into the system. Likewise unusable product / parts can be taken out of the service chain further avoiding clutter.

"Automation is a key capability enabling complete views of the transaction, timely communication with customers regarding time to resolve, the resolution, time for repair completion, ability for customer to be somewhat self-service."

- Executive Medical Device Company

Performance Management

Best-in-Class organizations have a keen focus on frequently (weekly, monthly) measuring key metrics that help accurately gauge the success of the return, refurbishment and repair operations in regard to productivity, profitability and customer value (Figure 7). These firms are almost twice as likely as all others to measure these key performance metrics (89% vs. 48%, respectively). Furthermore, these organizations are not only measuring the right metrics (i.e., productivity, profitability, customer value), but they also provide management and front-line staff with this insight. As seen in previous Aberdeen research on Service

ABERDEEN INSIGHTS – RECALL MANAGEMENT

With any product there is a chance that a failure may occur. If in fact this failure or defect impacts a broader group of parts or products it may be necessary to implement a recall to get all units (defective or not) off the market so the problem can be assessed. No service organization wants to have a recall occur, but nonetheless must be prepared, so this event doesn't negatively impact customers and revenue. In managing recalls, organizations are often challenged by a lack of information in regard to recalls, ascertaining the location of all products / parts that need to be recalled, and determining the true cost associated with the recall (Figure 9).

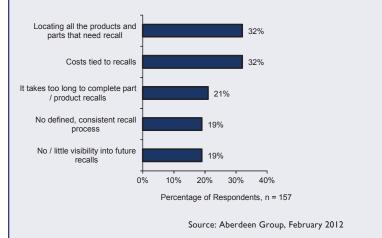


Figure 9: Issues That Arise With Recalls

To combat the challenge presented by a lack of information on recalls, the Best-in-Class put systems in place, define processes and established a central knowledgebase to record recalls (Table 7). The Best-in-Class are also 26% more likely than all others to provide service ownership of recalls (54% vs. 43%, respectively). As service gains importance within the organization, aspects that directly impact the satisfaction of the customer are becoming a part of service domain for the Best-in-Class.

Table 7: Key Capabilities Driving Recall Efficiency

Recall Capabilities	Percentage of Respondents, n = 157	
	Best-in-Class	All Others
System to notify customers and management of potential recall risk	64%	37%
Defined, consistent recall process	61%	47%
Centralized database of recall history	54%	36%
Courses Abordson Croup, Echruson (2012		

Source: Aberdeen Group, February 2012

Preparing for a recall is not something that can be delayed by the service organization in hopes that a recall will never occur. Best-in-Class organizations leverage a number of internal capabilities to provide visibility and consistency in processes in the case of a recall.



Intelligence and Performance Management: Moving Beyond the Rearview Mirror (April 2011), top performing organizations excel at not only data capture, but the use of this valuable data to make strategic business decisions.

Along with timely measurement of business metrics, the Bestin-Class tie information to quality improvements in process and product / parts. The Best-in-Class are 45% more likely than all others to frequently test repair products and in turn leverage these tests to improve product / part quality (61% vs. 42%, respectively). The customer expects quality service and products every time and top performing organizations revel in not only being 'right' every time but if not to ensure that an issue is corrected to provide the customer with a quality product and experience.

CHAPTER THREE: REQUIRED ACTIONS

All service organizations aspire to be Best-in-Class. In order to migrate from Laggard to Industry Average and eventually to Best-in-Class status the following actions highlight a roadmap to success in regard to more efficiently managing the return, refurbishment and repair operations.

Laggard Steps to Success

- Catch and release product / part data to relevant stakeholders. Without having data available to necessary and potential users, the data might as well have not been captured. Access and action are key differentiators in regard to what happens with information and specifically return, refurbishment and repair data. Industry Average organizations are 69% more likely than Laggards to have a centralized database for return, refurbish and repair data (54% vs. 32%, respectively).
- Don't let quality suffer. Continuous improvement should not only be a goal for lean manufacturing, but needs to be a mainstay mantra in the service operations in regard to the repair of parts and products. Only a quarter of Laggard organizations (26%) test repair products and link the repair data to quality improvements, compared to 37% among Industry Average firms. The customer has, and will continue, to clamor for more reliable parts and products (top pressure facing service organizations, Figure 3), and therefore all companies need to leverage valuable repair data to improve the quality, serviceability and efficiency of parts and products

Industry Average Steps to Success

• Set the right expectations (definitions) for return procedures. Customers have a role in the service in which they receive. For this reason, it is imperative that the service organization set the right expectations up front when



creating service contracts so both the customer and the organization understand how a good service experience will be measured upon. Best-in-Class organizations are more than twice as likely as Industry Average firms to have standardized definitions for return procedures and include in service contracts (71% vs. 34%, respectively). Organizations that have standardized definitions in place for return procedures incorporated in service contracts see a 75% level of customer satisfaction and 70% level of SLA compliance, compared to 70% and 42%, respectively for organizations that do not. The customer experience is directly linked to increased revenues, as an unhappy customer in this current competitive environment, can easily go somewhere else for the service they expect and require.

 Link analytics tools to improve service operations. Bestin-Class organizations are more than twice as likely as Industry Average firms to use business analytics tools to improve and better manage service operations (75% vs. 37%, respectively). Leveraging business analytics to better manage the service operations will not only impact the efficiency of service provided, but can also help in the identification of new service offerings in regard to the return, refurbishment and repair processes.

FAST FACTS

Top Benefits Realized by Improving Repair, Refurbishment, and Return Operations:

- $\sqrt{}$ Improved Customer Satisfaction 66%
- √ Increased Service Profitability 36%
- $\sqrt{1}$ Improved Customer Retention 31%
- Note Respondents asked to select top three.

Best-in-Class Steps to Success

Show them the money. Service organizations do hope that their employees have the greater good of the company at heart in all of their decisions and actions. However, the desired behaviors need to be incented properly. Currently fewer than 40% of Best-in-Class companies incent their field techs on timely or efficient return of parts / products back to the repair depot (39% and 32%, respectively). In recent Aberdeen research on Field Service 2012: The Right Technician (February 2012), 44% of top from refurbished / repair products as compared to 12% for those that do not have a sales team in place. These organizations with a dedicated sales team expect their refurbished / repaired product sales to increase by 6% in the next months as opposed to a 5% growth for those that do not have these teams in place. Despite only a 1% difference, when considering that organizations with a dedicated team sell

more parts in the first place this difference is measurable. This added revenue stream goes directly to the top line and allows the service organization to maximize the value of products that have already been produced as opposed to needing new products to satisfy customer demand.

- Automate tracking of all service parts and products throughout the service lifecycle. Currently, just over half of all Best-in-Class organizations track service parts and products performing organizations provide non-cash incentives to their field service employees. The most used non-cash incentives are gift cards (89% of top performers) or internal recognition (76% of top performers). Organizations that incent behaviors on the timely and efficient return of parts and products achieve better performance in meeting / exceeding SLAs and spare part fill rate.
- Sell service and repaired parts / products. Establishing a dedicated sales team that is knowledgeable about service offerings and motivated to sell service is a key step to achieving established service revenue goals. Currently, less than half of the Best-in-Class (43%) have an established sales and distribution team in place to sell refurbished and repaired parts / products. Even though less than 50% of the Best-in-Class have a dedicated sales teams for refurbished and repair parts, those that have established these teams have been able to achieve a 23% level of annual product sales from refurbished / repair products as compared to 12% for those that do not have a sales team in place. These organizations with a dedicated sales team expect their refurbished / repaired product sales to increase by 6% in the next months as opposed to a 5% growth for those that do not have these teams in place. Despite only a 1% difference, when considering that organizations with a dedicated team sell more parts in the first place this difference is measurable. This added revenue stream goes directly to the top line and allows the service organization to maximize the value of products that have already been produced as opposed to needing new products to satisfy customer demand.
- Automate tracking of all service parts and products throughout the service lifecycle. Currently, just over half of all Best-in-Class organizations track service parts and products throughout the service chain (i.e., initial shipment, asset recovery, repair, return, replacement) (54%). Without insight into location, quality and condition of parts and products throughout the service lifecycle, management

and service workers will be in the blind in regard to whether these assets can be leveraged in delivering service or if these parts / products are just clogging the system. Organizations that have automated tracking of service parts and products throughout the entire service lifecycle have seen a 4% decrease in total repair and refurbishment costs as compared to 3% decrease for those that do not. Having visibility into the type and number of returns that will be coming in has also led to the service operations being better prepared to handle the parts needs, and in turn the service organization more efficiently can manage. repair and refurbish the returns that flood in. Though only a percentage point difference the any added costs of return, refurbishment and repair has a negative impact of the profitability goals of the service organization. Beyond costs associated with improved tracking of service parts / products, organizations that automate all tracking have been able to reclaim 28% of the initial value of the part or product as compared to 19% for those that do not automate. Automation is needed to help provide the insight necessary for all stakeholders to be able to make realtime strategic decisions that can transform the service experience for the customer and ensure that Best-in-Class service is provided at all times.

ABERDEEN INSIGHTS – SUMMARY

The return, refurbishment and repair operations within a service organization can be a very fragmented and inefficient process. However, top performing organizations have been able to link the service operations to efficiently and effectively repair, return and refurbish service parts / products to quickly re-stock, return to customers, or dispose. Placing parts / products back into the service chain (or removing it) is integral to managing excess parts inventory while enhancing the speed of service delivery. Taking advantage of the opportunity from a customer satisfaction, revenue generation and cost containment perspective in regard to efficiently managing the return, refurbishment and repair operations is a key differentiator for Best-in-Class organizations in delivering service. Whether managed internally or through partnerships, these operations provide value for the customer and the company.



APPENDIX A: RESEARCH METHODOLOGY

Between January and February 2012, Aberdeen examined the use, the experiences, and the intentions of more than 150 service and support organizations in the management of return, refurbishment and repair operations.

Aberdeen supplemented this online survey effort with interviews with select survey respondents, gathering additional information on desired service customer support and service delivery plans, strategies and prioritized investments.

Responding enterprises included the following:

- Job title: The research sample included respondents with the following job titles: C-Level executive (17%); Vice-President or Director (32%); Manager (39%); and other (12%).
- Department / function: The following industries had the largest representation in the study: Procurement, Supply Chain, or Logistics (32%); Customer Service / Support (19%); Operations (8%); Field Service (5%).
- Industry: The following industries had the largest representation in the study: Industrial Equipment /Product Manufacturing (20%), Telecommunication (17%), Computer Equipment (14%), Medical Devices / Services (14%), General Manufacturing (8%), Consumer Electronics (8%).
- **Geography:** The majority of respondents (65%) were from North America. Remaining respondents were from Europe (18%), the Asia-Pacific region (11%) and rest of the world (6%).
- Company size: Thirty-four percent (34%) of respondents were from large enterprises (annual revenues above US \$1 billion); 42% were from midsize enterprises (annual revenues between \$50 million and \$1 billion); and 24% of respondents were from small businesses (annual revenues of \$50 million or less).
- **Headcount:** Fifty-six percent (56%) of respondents were from large enterprises (headcount greater than 1,001 employees); 29% were from midsize enterprises (headcount between 101 and 1,000 employees); and 15% of respondents were from small businesses (headcount between 1 and 100 employees).

Table 8: The PACE Framework Key

Overview

Aberdeen applies a methodology to benchmark research that evaluates the business pressures, actions, capabilities, and enablers (PACE) that indicate corporate behavior in specific business processes. These terms are defined as follows:

- **Pressures** external forces that impact an organization's market position, competitiveness, or business operations (e.g., economic, political and regulatory, technology, changing customer preferences, competitive)
- Actions the strategic approaches that an organization takes in response to industry pressures (e.g., align the corporate business model to leverage industry opportunities, such as product / service strategy, target markets, financial strategy, go-to-market, and sales strategy)
- Capabilities the business process competencies required to execute corporate strategy (e.g., skilled people, brand, market positioning, viable products / services, ecosystem partners, financing)
- Enablers the key functionality of technology solutions required to support the organization's enabling business practices (e.g., development platform, applications, network connectivity, user interface, training and support, partner interfaces, data cleansing, and management)

Source: Aberdeen Group, April 2012

STUDY FOCUS

Responding service executives completed an online survey that included questions designed to determine the following:

- √ The degree to the return, refurbishment and repair operations are managed efficiently
- \surd The level of oversight of Service management into return, refurbishment and repair
- √ The top pressures being faced in regard to efficiently managing return, refurbishment and repair operations
- \surd The level of outsourced capabilities leveraged in the service parts and product workflow
- √ The study aimed to identify emerging best practices for return, refurbishment and repair processes, and to provide a framework by which readers could assess their own management capabilities.



Table 9: The Competitive Framework Key

Overview

The Aberdeen Competitive Framework defines enterprises as falling into one of the following three levels of practices and performance:

- Best-in-Class (20%) Practices that are the best currently being employed and are significantly superior to the Industry Average, and result in the top industry performance.
- Industry Average (50%) Practices that represent the average or norm, and result in average industry performance.
- Laggards (30%) Practices that are significantly behind the average of the industry, and result in below average performance.

In the following categories:

- Process What is the scope of process standardization? What is the efficiency and effectiveness of this process?
- Organization How is your company currently organized to manage and optimize this particular process?
- Knowledge What visibility do you have into key data and intelligence required to manage this process?
- **Technology** What level of automation have you used to support this process? How is this automation integrated and aligned?
- **Performance** What do you measure? How frequently? What's your actual performance?

Source: Aberdeen Group, April 2012

Table 10: The Relationship Between PACE and the Competitive Framework

PACE and the Competitive Framework – How They Interact

Aberdeen research indicates that companies that identify the most influential pressures and take the most transformational and effective actions are most likely to achieve superior performance. The level of competitive performance that a company achieves is strongly determined by the PACE choices that they make and how well they execute those decisions.

Source: Aberdeen Group, April 2012

APPENDIX B: RELATED ABERDEEN RESEARCH

Related Aberdeen research that forms a companion or reference to this report includes:

- Field Service 2012: The Right Technician; February 2012
- State of Service Management: Forecast for 2012; January 2012
- Service Information Series: Parts Management; January 2012
- High Value Parts: Enhancing Mission Critical Parts Delivery; August 2011
- Field Service 2011: Mobility and the Extension of the Service Enterprise; July 2011
- Service Parts Logistics 2011: Driving Improved Service Performance via Tighter Integration; June 2011
- Service Intelligence and Performance Management: Moving Beyond the Rearview Mirror; April 2011
- Reverse Logistics: Driving Improved Returns Directly to the Bottom Line; February 2010
- Information on these and any other Aberdeen publications can be found at www.aberdeen.com.

Authors: Aly Pinder Jr., Senior Research Associate, Service Management, (aly.pinder@aberdeen.com), LinkedIn, Twitter; Sumair Dutta, Research Director, Service Management, (sumair.dutta@ aberdeen.com), LinkedIn, Twitter

For more than two decades, Aberdeen's research has been helping corporations worldwide become Best-in-Class. Having benchmarked the performance of more than 644,000 companies, Aberdeen is uniquely positioned to provide organizations with the facts that matter—the facts that enable companies to get ahead and drive results. That's why our research is relied on by more than 2.5 million readers in over 40 countries, 90% of the Fortune 1,000, and 93% of the Technology 500. As a Harte-Hanks Company, Aberdeen's research provides insight and analysis to the Harte-Hanks community of local, regional, national and international marketing executives. Combined, we help our customers leverage the power of insight to deliver innovative multichannel marketing programs that drive business-changing results. For additional information, visit Aberdeen http://www.aberdeen.com or call (617) 854-5200, or to learn more about Harte-Hanks, call (800) 456-9748 or go to http://www.harte-hanks.com.

This document is the result of primary research performed by Aberdeen Group. Aberdeen Group's methodologies provide for objective factbased research and represent the best analysis available at the time of publication. Unless otherwise noted, the entire contents of this publication are copyrighted by Aberdeen Group, Inc. and may not be reproduced, distributed, archived, or transmitted in any form or by any means without prior written consent by Aberdeen Group, Inc. (2012a)



Featured Underwriters

This research report was made possible, in part, with the financial support of our underwriters. These individuals and organizations share Aberdeen's vision of bringing fact based research to corporations worldwide at little or no cost. Underwriters have no editorial or research rights, and the facts and analysis of this report remain an exclusive production and product of Aberdeen Group. Solution providers recognized as underwriters were solicited after the fact and had no substantive influence on the direction of this report. Their sponsorship has made it possible for Aberdeen Group to make these findings available to readers at no charge.



ModusLink Global Solutions, Inc. designs and executes supply chain processes to solve cost, time-to-market, customer satisfaction and revenue objectives. Our supply chain, aftermarket and e-Business solutions support the end-to-end product lifecycles of the world's leading technology and consumer goods companies. ModusLink has decades of experience working with clients to streamline returns, repair and recovery processes to increase value recovered while delivering a superior customer brand experience . We can integrate these critical functions seamlessly with global supply chain and e-business initiatives and programs. Backed by a footprint of more than 25 solution centers in 15 countries, clients can react quickly to shifting market dynamics impacting supply chain performance and revenues.

For additional information on ModusLink Global Solutions, Inc.: ModusLink Global Solutions, Inc. 1601 Trapelo Road, Suite 170 Waltham, MA 02451 Telephone: 781.663.5000 www.moduslink.com www.moduslink.com/contact



Since that first effort, OnProcess has pioneered the development of comprehensive service supply chain optimization programs using advanced methods and technologies that can be applied to meet the specific performance goals of its clients. Unlike point solutions which address symptoms or component problems, our comprehensive approach, combining people, process and technology, enables us to fully diagnose, address and solve our clients' service supply chain challenges. In the years that have followed, our size and service offerings have grown and diversified along with our client base, but always with the core component contained in Our Mission - to provide measurable, predictable and sustainable results for our clients.

For additional information on OnProcess: OnProcess Technology™ 200 Homer Avenue Ashland, MA 01721 Telephone: 508.520.2711 Fax: 508.881.9450 www.onprocess.co



©2014 ModusLink Global Solutions. All rights reserved worldwide. ModusLink and the ModusLink logo are trademarks or registered in the United States and/or other countries. All other names are the property of their respective owners trademarks of ModusLink Global Solutions. For additional information on ModusLink Trademarks, please see http://www.moduslink.com/terms-and-privacy. Specifications and product availability are subject to change without notice.