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Managing the Last Mile

Driving Effective Service Parts Execution

April 2007

Executive Summary

Optimizing post-sale service performance involves three key elements: 1) meet or exceed customer demands; 2) drive out cost; and 3) increase revenue. At times these elements can be in conflict resulting in sub-optimal financial and operational performance. Increasing customer expectation for higher asset availability is forcing companies to take a hard look at the business processes and strategies surrounding service parts execution and fulfillment. 82% of service providers have leveraged service parts execution and distribution solutions to achieve over 90% service part-fill rate and first time fix rate. They have also increased customer satisfaction, reduced stock-outs, improved inventory control, and lowered operating costs.

Best in Class Performance

- Best in class firms reported 17% higher part fill rate and 22% higher first-time fix rate than all other companies.
- Best in Class companies are ***four times*** as likely as all others to achieve 90% or better SLA compliance rate.

Competitive Maturity Assessment

- More than 60% of best in class firms capture and analyze product- and customer-specific service parts data in real-time.
- 89% of best in class companies closely align service parts planning with procurement/supply management functions vs. 36% of all other firms.
- Best in class companies are ***three times*** as likely as others to have a VP or higher in charge of service operations.
- Best in class firms are ***four times*** as likely as laggards to use service parts execution and distribution solutions and ***three times*** as likely to use parts planning and forecasting tools.

Required Actions

- Replace localized parts management processes with a single, integrated set of best practices that touch all elements of parts fulfillment, from forecasting and procurement to logistics, storage and returns.
- Align parts locations with SLA agreements and enable logistics support to fulfill such commitments.
- Enhance technician visibility to part inventories and enable them to order service parts.
- Develop logistics network partnerships to enhance parts execution.
- Audit parts supply chain processes at least twice per year, more frequently if possible.

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Fast Facts

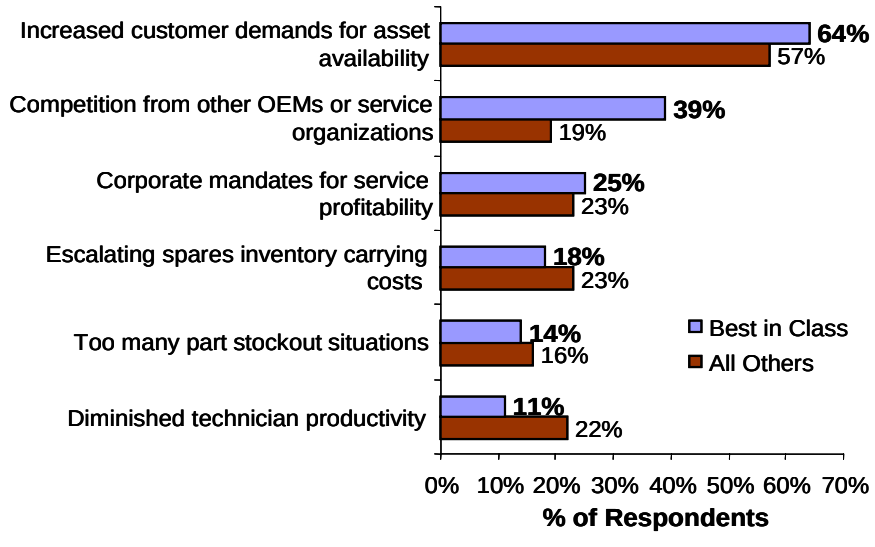
- Best-in-class firms are *twice* as likely to stock service parts on customer site and leverage regional couriers for parts delivery as all other companies.
- Best-in-class companies *three times* as likely to rely on third-party logistics providers to handle their service parts execution as all other companies.
- Best-in-class companies are *four times* as likely as all others to achieve 90% or better SLA compliance as all other companies.

Companies challenged to optimize their post-sale service operations are turning their attention to service parts execution to meet increasing customer demand for faster service. This makes sense given the fact that service parts are at the core of service execution and unless companies cost-effectively get the "right" part to the "right" location at the "right" time to meet service level agreements, the service operation will remain sub-optimized. According to Aberdeen's research, 64% of leading firms indicated that customer demand for higher asset availability is a top driver for improvement of service parts fulfillment (Figure 1). Such firms are also more likely to improve their service parts execution to differentiate themselves to achieve competitive differentiation.

Maturity Class Framework

Service organizations have to strike a delicate balance in managing service parts between having enough inventory on hand to meet the planned and unplanned demand and minimizing excess inventory carrying costs and parts delivery costs. Aberdeen used key per-

Figure 1: Market Pressures Driving Last Mile Focus



Source: AberdeenGroup, April 2007

formance criteria from both categories to distinguish best-in-class companies from industry average and laggard organizations. These key performance indicators (KPIs) are ***process measures*** such as service part fill rate, and ***quality measures*** such as SLA compliance and first-time fix rate. As highlighted in Table 1 and Figure 2, best-in-class companies outperformed their counterparts in every performance category.

Table 1: Best in Class Differentiation

	Average Performance		
Metric	Best in Class (Top 20%)	Industry Average (Middle 50%)	Laggards (Bottom 30%)
Service Parts Fill Rate	90.4%	77.8%	58.1%
First Time Fix Rate	90.0%	73.6%	40.8%
Average Spares Inventory Turns	7.14	3.82	3.08

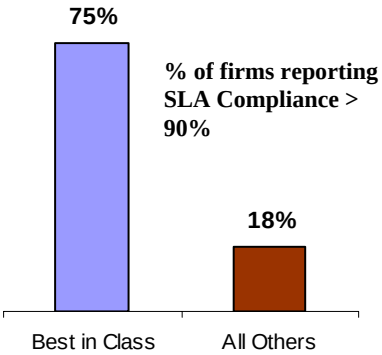
Source: AberdeenGroup, April 2007

Best in Class PACE Model

Effective last-mile strategies has a direct impact on the service provider's goal of delivering the most efficient and effective post-sale service. Achieving that goal requires a combination of strategic actions, organizational capabilities and enabling technology as summarized in Table 2.

To address the customer demand for higher asset availability, leading service providers are adopting several actions to shorten the last mile of service parts fulfillment. The top action was to deploy service parts and parts inventory at customer sites. In fact, best-in-class firms were ***twice*** as likely as all other firms to follow this strategy. To get the parts to customer locations, leading providers were also ***twice*** as likely as others to leverage regional couriers and ***3 times*** as likely to rely on third-party logistics providers to handle their service parts execution. These actions, coupled with regular performance audits of remote stocking locations against standard metrics, have enabled best-in-class service providers to achieve service excellence (Figure 3).

Figure 2: SLA Excellence for BIC



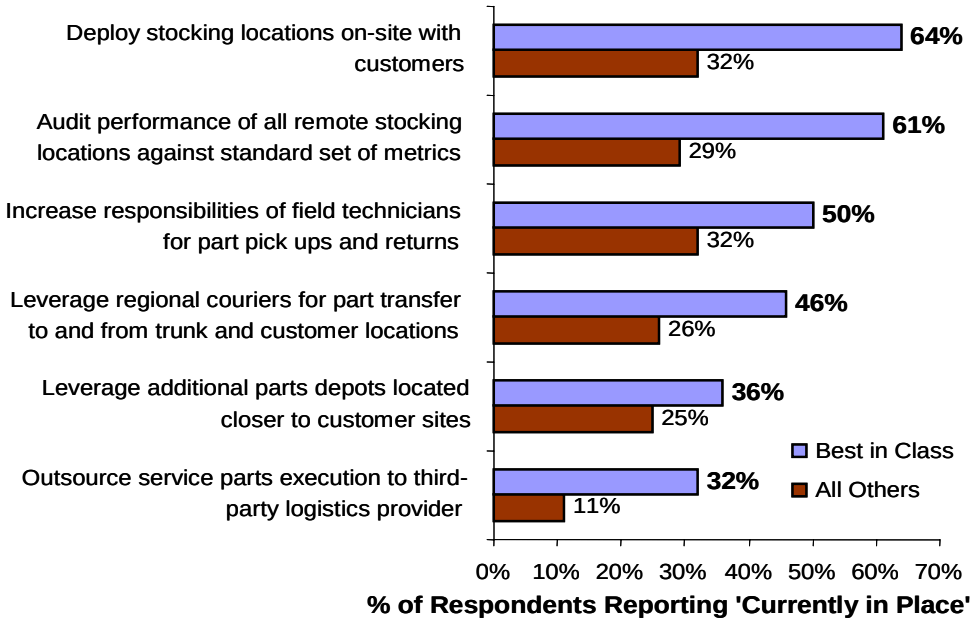
Source: AberdeenGroup, April 2007

Table 2: Best-in-Class PACE Framework

Pressures	Actions	Capabilities	Enablers
• Increased customer demands for asset availability	• Audit performance of all remote stocking locations against a standard set of metrics • Deploy stocking locations on-site with customers • Leverage regional couriers for part transfers to and from trunk and customer stock locations	• Service parts planning closely aligned with procurement/supply management functions • Standard, trackable process for parts pick-up and drop-off (PUDO) • Standardized enterprise-wide procedures for parts storage, fulfillment, and expediting • Frequent measurement of service parts fill rates, customer service levels and impact on overall profitability • Ability to position and provision spares inventory according to SLA commitments	• Service Parts Planning/Forecasting • Service Parts Execution/Distribution • Field Service Scheduling/Routing • Mobile Field Service • Inventory/Warehouse Management System • Returns/Exchange Management System • Transportation Management System

Source: Aberdeen*Group*, April 2007

Figure 3: Customer On-Site Stocking for Best Service Firms



Source: Aberdeen*Group*, April 2007

Aberdeen Insights – Part 1

The fact that three-fourth's of BIC companies report an SLA compliance rate of greater than 90% means that such companies are looking beyond the customer expectations and are using service execution as a competitive trump card. Only 27% of average companies and none of the laggard companies can make the same SLA performance claim. In fact, none of the laggard companies indicated ANY gain in SLA compliance over the past two years. Best-in-class strategy aimed at placing service parts on customer sites is possibly resulting in SLA performance excellence. In fact, firms that stocked service parts on customer sites reported a ***22% higher SLA compliance*** on average than those that did not stock parts on customer sites.

Chapter Two:
Benchmarking Requirements for Success

Fast Facts

- Best-in-class companies are **twice** as likely as all others to have standardized enterprise-wide procedures for parts storage, fulfillment, and expediting and a standard trackable method for parts pick up and drop off (PUDO).
- Best in class firms are **four times** as likely as laggards to use service parts execution tools and **three times** as likely to use parts planning and forecasting tools.
- Thirty-six percent (36%) of best-in-class companies are successful in reducing parts on hand inventory over the last two years compared to only 19% of all other firms.

A clear relationship exists between having an integrated and measurable process for managing service parts execution and higher SLA compliance and service profitability. Companies that implement standard processes across their enterprise, establish and monitor key performance indicators and adopt technology solutions to enable these business processes achieve significantly higher results than those who use ad hoc systems with limited or no measurement (Table 1).

Case Study: *Large High-Tech Manufacturer*

The Senior Director of Supply Chain, managing 30,000 to 40,000 SKUs in the spare parts supply chain needed to support the company goal of a common and positive global customer service experience. "*We began by implementing a comprehensive parts forecasting system worldwide. We then contracted with a single logistics provider on a global basis to streamline freight and parts delivery. The result has been much lower repair costs overall and a significantly lower investment in parts inventory than we would have made. The savings in global freight costs alone can probably be measured in millions of dollars.*"

The director credits the company's "spares on site" program which included placing spare parts inventory on select customer sites and 600 global parts depot locations as key to meeting customer expectations for parts on site with lead times as short as two hours. He also credited company's centralized executive oversight as a key factor in achieving the best-in-class performance. At the company, a Senior Vice President, who is only two levels below the CEO, is responsible for all customer service decisions. The service director who has global responsibility for all spare parts supply chain operations reports directly to the SVP of Customer Service and Support. "I don't see how you can manage a global support structure without this type of centralized management," says the director. "Not only does it focus and speed decision-making, it enables us to provide customers with a common service experience across multiple geographies. And it's paid off, in terms of increasing fill rates, first-time fix rates and SLA compliance."

Competitive Maturity Assessment

Survey respondents fall into one of three categories – Laggard, Industry Average, or Best-in-Class — display characteristics in the five key categories of Aberdeen's competi-

tive framework: (1) process (ability to align service parts planning with procurement and supply chain management functions and the presence of a standard trackable process for parts pick up and drop off); (2) organization (oversight of service P&L by VP or higher); (3) knowledge/data management (discipline to regularly capture and manage data around the parts execution process); (4) technology (selection or appropriate tools and intelligent deployment of those tools); and (5) performance management (ability of the organization to measure the benefits of technology deployment and use the results to improve key processes further).

Table 3: Competitive Framework

	Laggards	Average	Best-in-class
Process	Service parts planning is closely aligned with procurement/supply management functions		
	17%	47%	89%
	Standard, trackable processes for parts pick-up and drop-off (PUDO)		
	10%	25%	68%
Organizational Structure	Vice-president or higher level executive oversees P&L for service chain operations:		
	12%	39%	82%
Knowledge/ Data Management	Evaluation of logistics network structure and effectiveness at least TWICE annually		
	2%	32%	46%
	Customer- and product-specific service parts data is captured and analyzed in real-time		
	7%	25%	61%
Technology Usage	Parts execution and planning technologies currently in use:		
	• 21% Service parts execution/distribution • 24% Returns/exchange management system • 19% Field service scheduling/routing • 29% Inventory/warehouse management system (WMS) • 19% Service parts planning/forecasting	• 42% Service parts execution/distribution • 32% Returns/exchange management system • 33% Field service scheduling/routing • 42% Inventory/warehouse management system (WMS) • 39% Service parts planning/forecasting	• 82% Service parts execution/distribution • 68% Returns/exchange management system • 64% Field service scheduling/routing • 68% Inventory/warehouse management system (WMS) • 57% Service parts planning/forecasting

	Laggards	Average	Best-in-class
Performance Management	Frequent measurement of service parts fill rates, customer service levels and impact on overall profitability:		
	7%	57%	96%

Source: AberdeenGroup, April 2007

Organizational Support and Technology Enablers

Establishing the most effective internal foundation for service parts fulfillment requires a combination of two critical elements: 1) technologies that come together to form an integrated working solution and 2) qualities of the organization that give it the ability to turn those technologies into a useful and competitive advantage.

Best-in-class firms are nearly four times as likely as laggards to use service parts execution tools while also being nearly three times as likely to use parts planning and forecasting tools. Firms that leverage a combination of parts planning and execution tools see a near 6% performance advantage in SLA compliance when compared to those that only use service execution tools. Execution tools play a big role in ensuring that the right part is in the right place to meet customer demand. However, in isolation these tools miss the critical planning and forecasting functionalities that enable service organizations to prepare for variations in the demand for service parts. Planning and forecasting tools, when added to the mix, can help ensure higher SLA compliance and fewer stock outs while at the same time minimizing the need for last-minute logistics expense to transport needed parts.

While effective parts execution can pay off in meeting customer demand and improving SLA compliance, it can also go a long way in assisting service organizations to reduce service costs and improve profitability. Best-in-class firms were ***more than two times as likely*** as all other firms to have seen an increase in service profitability over the last two years. Part of this stems from the fact that best firms are more successful in keep smaller parts inventories in spite of a majority of their customers requiring parts onsite nearly 28% sooner than customers for all other companies. In fact, 36% of Best in Class companies claim that they were successful in reducing parts on hand inventory over the last two years when compared to only 19% of all other firms.

Single executive oversight of all relevant service operations improves efficiency and drives profitability. Nearly 8 in 10 best in class firms claim having a Vice President or higher in charge of P&L for service operations. This maps directly to improved performance in service parts execution and efficiency. (Table 4)

Table 4: Executive Oversight and Accountability Map to Parts Performance

Metric	VP Level or Higher Oversight of Service	All Others
Service Parts Fill Rate	83.9%	71.7%
First Time Fix Rate	81.8%	67.2%
SLA Compliance	62.5%	46.8%

Average Inventory Turns	5.6	3.9

Source: Aberdeen*Group* April 2007

Having the right process and oversight will still fail to pay appropriate dividends unless you track the right metrics. Nearly 100% of best in class frequently measure service parts fill rates, customer service levels and impact on overall profitability. This is in support to the best in class propensity (61% of best in class firms) to capture and analyze customer- and product-specific data in real-time.

"Palm is one of the few companies that took the step right off the bat of putting a senior executive in charge of the service chain. The service supply chain is a lot bigger than a lot of corporate execs at a lot of companies realize. And so they tend to downplay the significance of proper management of that. It's a true gap in most companies now."
Larry Maye, Senior Director, Global Reverse Logistics, Palm Inc.

Aberdeen Insights – Part 2

Operating services in corporate silos of authority, information management and business process is a roadmap for inefficient delivery of post-sale service and parts execution. Exceptional service management is a highly dynamic undertaking requiring frequent -- if not real-time -- evaluation of established processes, technology enablers and strategies. Managing the parts component effectively is as important as having enough skilled technicians available to handle service requests. Maintaining the right balance of parts on hand to minimize stock out situations without carrying needless inventory can only be accomplished by rigorous adherence to proven effective and integrated procedures and the willingness to regularly measure and adjust those processes against changing business and customer demand. Placing the responsibility for this critical oversight in the hands of a single high level executive is the best way to invoke the discipline necessary to establish and maintain an effective parts management operation.

Chapter Three:
Required Actions

Fast Facts

- Replace localized parts management processes with a single, integrated set of best practices that touch all elements of parts fulfillment, from forecasting and procurement to logistics, storage and returns.
- Align parts locations with SLA agreements and enable logistics support to fulfill such commitments.
- Enhance technician visibility to part inventories and enable them to order service parts.
- Develop logistics network partnerships to enhance parts execution.
- Audit parts supply chain processes at least twice per year, more frequently if possible.

Whether a company is trying to move its performance in service parts execution from "Laggard" to "Industry Average," or "Industry Average" to "Best in Class," the following actions will help spur the necessary performance improvements:

Laggard Steps to Success

1. *Measure parts management expense, SLA compliance and service profit.*

   Establish both the process and discipline to measure key aspects of parts and service performance for stronger decision-making and less ad hoc action. Fully 96% of Best in Class companies currently have systems and metrics in place to frequently measure fill rates, customer service levels and profitability.

2. *Position and provision spares inventory according to SLA commitments.*

   Meeting customer demand for service performance, whether dictated by service level agreement or simply expectation, is core to any service organization. Parts fulfillment is a key component of that equation. Whether it means getting customers to stock parts in their location, adopting decentralized parts storage or developing relationships with couriers or third-party logistics suppliers, establishing parts management practices to ensure the right part is always available to meet that commitment is foundational.

3. *Fix it right the first time.*

   Rework situations add significant cost to service operations, play havoc on scheduling and dispatch operations, and have a negative impact on customer satisfaction. The vast majority of Best in Class companies surveyed achieved a 90% or higher first time fix rate. Establishing a focus around first call completion, ensuring you always have the right part available to your service tech so that repairs are completed in a single call, will certainly minimize costs.

Industry Norm Steps to Success

1. *Implement standardized enterprise-wide processes for parts storage and fulfillment.*

   Best in class firms are more than 2 times as likely as all other firms to have enterprise-wide procedures. Nearly 89% also state that service parts planning is closely aligned with procurement/supply management functions. Breaking down the information silos across the enterprise will enable improved parts fulfillment, remove communication inefficiencies and subsequently have a direct impact on enterprise profitability.

2. *Embrace parts planning and forecasting to complement execution strategies.*

   Effective parts execution management, when linked to a similarly strong forecasting process is truly a Best in Class enabler. The best parts execution process can be supercharged when aligned with forecasting and planning strategies that help predict and prepare for fluctuations in service parts demand. This is turn helps reduce parts inventory holdings, boost SLA compliance and ultimately impact service costs and profitability.

3. *Identify an executive champion.*

   Identify a single executive with enough internal leverage to drive parts execution. Aberdeen's research highlights the value of this critical phase of the competitive framework (table 4). This individual should understand overall corporate strategy well so that critical parts management decisions are aligned with corporate goals. He or she should have executive decision-making sign-off therefore mitigating the need for additional approval.

Best in Class Next Steps

1. *Enhance technician visibility to part inventories and enable them to order service parts.*

   The ultimate knowledge of what part is needed to complete a repair usually rests with the service technician in the field. Leveraging the tools available to provide these individuals with a way to check parts availability and order parts automatically through whatever mobile device they use can streamline the parts execution process. Currently, only 43% of best in class firms have this capability with more than a third of top firms currently looking to implement this ability in the near future.

2. *Develop logistics network partnerships to enhance parts execution.*

   The best service operations are constantly looking at new ways to increase efficiencies. Some strategies are geared towards the formation of partnerships with third-party logistics providers or with regional couriers to ensure that customer expectations for parts fulfillment are adequately met. In addition, nearly a third of best in class firms are looking to leverage additional parts depots located closer to customer sites. This was the top desired capability among best in class firms and highlights the focus of these firms to efficiently and effectively respond to all service parts and other customer service request.

Aberdeen Insights – Part 3

Effective service parts fulfillment is critical to the delivery of effective and efficient post-sale service. Some actions seem obvious. Get the parts as close to the customer to meet demand and SLA, balancing financial requirements. Leverage transportation providers and 3PLs when possible. As for processes - linking parts forecasting with parts procurement and execution systems can close gaps. Tying these systems into other enterprise support tools like ERP, CRM and Scheduling and Routing applications can improve overall service performance. By implementing standard processes and measurements, along with the discipline to monitor and adjust strategies, companies can drive last mile parts fulfillment from cost containment to competitive weapon.

Appendix A:
Research Methodology

In March and April 2007, Aberdeen Group captured 150 qualified respondents in a quantitative survey launched to evaluate and report the impact of effective parts execution and planning on a company's financial and operational metrics.

The business executives completed an online survey that included questions designed to determine the following:

- The importance of effective parts planning and execution to the organization's overall financial performance;
- The change over the previous two years;
- The major challenges and pressures organizations face in managing and improving their parts provisioning and management;
- The actions and strategies organizations have used to improve the effectiveness of their parts execution;
- Current and planned use of software solutions and technologies to aid business processes; and
- The benefits realized from implementing new business processes and solutions.

Aberdeen supplemented this survey effort with telephone interviews with select survey respondents to gather additional insights on pressures, actions, experiences, and results.

Survey respondents can be characterized as follows:

- ***Job title/function:*** The research sample included respondents with the following job titles: C-Level (CEO, CFO, CIO, COO, etc), vice president, director, manager, staff, and other. 14% were C-level, 24% were vice presidents or directors, 36% were managers, and 26% were staff or other.
- ***Industry:*** Responses were received from 26 different industry sub-segments. A sampling of responses includes: Automotive – 10%, Consumer – 15%, Hi-Tech – 22%, Industrial Manufacturing – 10%, Medical Manufacturing – 13%, Telecom – 6%, Transportation – 9%, Utilities – 4%
- ***Geography:*** Responses were received from all geographic areas of the world – 64% from North America, 25% from EMEA, 9% from Asia/Pacific, 2% from South and Central America.
- ***Company size:*** 30% from large enterprises (> US$1 billion); 44% from midsize enterprises (revenues between $50 million and $1 billion); and 26% of respondents were from smaller businesses (annual revenues of $50 million or less).

Solution providers recognized as sponsors of this report were solicited after the fact and had no substantive influence on the direction of the *Managing the Last Mile: Driving Effective Service Parts Execution* Benchmark report. Their sponsorship has made it possible for Aberdeen Group to make these findings available to readers at no charge.

Table 5: PACE Framework

PACE Key
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: AberdeenGroup, April 2007

Table 6: Competitive Framework

Competitive Framework Key
The Aberdeen Competitive Framework defines enterprises as falling into one of the three following levels of SERVICE PARTS practices and performance: *Best in class (20%)* — Parts practices that are the best currently being employed and significantly superior to the industry norm, and result in the top industry performance. *Industry norm (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

Source: AberdeenGroup, April 2007

Table 7: Relationship between PACE and Competitive Framework

PACE and Competitive Framework How They Interact
Aberdeen research indicates that companies that identify the most impactful 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.

Source: AberdeenGroup, April 2007

Appendix B:
Related Aberdeen Research

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

- *Industry Best Practices in Reverse Logistics*, January 2007
- *Service Parts Management Update*, October 2006
- *The Convergence of People and Parts in the Service Chain*, March 2006
- *Service Parts Solution Selection Report*, September 2005

Information on these and any other Aberdeen publications can be found at www.chiefserviceofficer.com or inquire by e-mail at memberservices@aberdeen.com.

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