

The Impact of Location on Field Service

December 2007



Executive Summary

Demand from customers for improved service performance, in the form of faster service resolution and improved asset uptime is forcing service organizations to leverage location intelligence to appropriately allocate their field resources. Location data can be used to optimize the execution of service delivery while assisting firms in planning the allocation of their resources required for field service. Firms that have leveraged location intelligence have seen sizeable improvements to service response times, workforce utilization, and service profitability.

Best-in-Class Performance

In a September and October 2007 research survey of approximately 330 service professionals, Aberdeen benchmarked four key performance criteria to distinguish Best-in-Class companies. Such firms revealed the following performances stats:

- 76% current workforce utilization
- 84% of time technician arrives within promised service response window
- 16% improvement in service profitability (as a percentage of service revenue)
- 14% improvement in asset uptime over the last two years

Competitive Maturity Assessment

Survey results show that the firms enjoying Best-in-Class performance shared several common characteristics. These firms are:

- Nearly four-times as likely as Laggards to optimize service schedules in real-time using location of service assets as a key criteria
- More than two-times as likely as Laggards to measure service technician and fleet performance in real-time
- More than four-times as likely as Laggards to use parts management systems
- More than two-times as likely to use fleet management solutions

Required Actions

To achieve Best-in-Class performance, companies must:

- Develop metrics and systems to integrate location intelligence data and track service performance
- Reward and provide incentive for technicians that comply with established optimized routes
- Share location-based service data for resource allocation and product design issues
- Deploy analytics and dashboards for increased executive visibility into geographic-specific service performance

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

"With the enhanced 'sky view' and visibility we can now make a quicker and better informed decision about the right person to send at the right time for our emergency response services."

~ Brian Daschbach
SVP, Integrated Field Services,
Baltimore Gas and Electric

Send to a Friend 

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	4
Business Context	4
The Maturity Class Framework.....	4
The Best-in-Class PACE Model	6
Best-in-Class Strategies.....	7
Chapter Two: Benchmarking Requirements for Success	9
Competitive Assessment.....	10
Capabilities and Enablers.....	12
Process.....	12
Organization	12
Knowledge Management.....	13
Technology.....	13
Performance Management.....	14
Chapter Three: Required Actions	16
Laggard Steps to Success.....	16
Industry Average Steps to Success	17
Best-in-Class Steps to Success.....	17
Appendix A: Research Methodology.....	19
Appendix B: Related Aberdeen Research.....	21

Figures

Figure 1: Pressures Driving LBS Adoption.....	7
Figure 2: Strategic Actions to Leverage Location Intelligence.....	8
Figure 3: GPS-Enabled Hardware Trends.....	14
Figure 4: Improvements Since LBS Adoption	15

Tables

Table 1: Companies with Top Performance Earn Best-in-Class Status	5
Table 2: The Best-in-Class PACE Framework	6
Table 3: The Competitive Framework.....	11
Table 4: Knowledge Management Effect on Asset Uptime	13
Table 5: The PACE Framework Key	20
Table 6: The Competitive Framework Key	20
Table 7: The Relationship Between PACE and the Competitive Framework	20

Chapter One: Benchmarking the Best-in-Class

Business Context

Visibility into the location of key service assets (such as technicians, fleet vehicles, and parts) as well as the location of customer sites and / or customer assets that require service can be a key customer service enhancing tool for service and manufacturing firms. Firms recently surveyed by Aberdeen indicated that, on average, they manage over 200 technicians (65% hired, 35% outsourced or third-party) and nearly 75 vehicles. The key to the service delivery equation for them is getting all these resources adequately aligned to meet customer needs. Inadequate visibility into asset location and management of performance is directly attributable for these firms reporting an inadequate 65% success rate in actually meeting pre-stated service response times.

This report will reveal that Best-in-Class organizations are looking for more than a pure breadcrumb view of their service technicians but are also looking to location data to effectively:

- Schedule technicians in real-time using location data as a key optimization criteria
- Monitor asset performance and asset security
- Integrate location trends into service forecasts to adequately locate service assets to meet service demand
- Enhance product design and quality management via intelligence into the location of asset failure rates and incidence of service visits

Leveraging location data for the aforementioned uses ensures the highest levels of service, as measured by faster service resolution and improved asset uptime, while allowing for maximized service asset utilization and controlled service-related costs.

The Maturity Class Framework

Aberdeen's determination of Best-in-Class is based on four key performance metrics that align directly with the key pressures and drivers faced by all service firms in improving service performance. These metrics address service performance in terms of success in meeting customer expectations for speed of service and asset performance, while also addressing internal organizational efficiencies as they relate to technician utilization and overall service profitability (Table 1).

Fast Facts

- ✓ 43% of Best-in-Class firms report serviceable asset uptimes greater than 81%, compared to 0% of laggards
- ✓ Best-in-Class firms reported service margin improvements that are four-times greater than those of Laggard firms over the last two years
- ✓ 53% of Best-in-Class firms report a greater than 81% success rate in meeting service response commitments when compared to 3% of Laggards
- ✓ Best-in-Class firms have four-times the advantage over Laggards in current workforce utilization

Table I: Companies with Top Performance Earn Best-in-Class Status

Definition of Maturity Class	Mean Class Performance
<p>Best-in-Class: Top 20% of aggregate performance scorers</p>	<ul style="list-style-type: none"> ▪ 76% workforce utilization ▪ 84% of time technician arrives within promised service response window ▪ 14% improvement in asset uptime over the last two years ▪ 16% improvement in service profitability (as a percentage of service revenue) over the last two years
<p>Industry Average: Middle 50% of aggregate performance scorers</p>	<ul style="list-style-type: none"> ▪ 63% workforce utilization ▪ 63% of time technician arrives within promised service response window ▪ 10% improvement in asset uptime over the last two years ▪ 7% improvement in service profitability (as a percentage of service revenue) over the last two years
<p>Laggard: Bottom 30% of aggregate performance scorers</p>	<ul style="list-style-type: none"> ▪ 18% workforce utilization ▪ 20% of time technician arrives within promised service response window ▪ 4% improvement in asset uptime over the last two years ▪ 4% improvement in service profitability (as a percentage of service revenue) over the last two years

Source: Aberdeen Group, October 2007

Best-in-Class firms perform significantly better than others in ensuring that their technicians arrive within the stated performance times while maintaining higher levels of service workforce utilization inferring that a larger portion of technician time is spent on work at customer sites and not in transit or in downtime.

While customers of leading firms are much less likely to have to wait around for their technicians to arrive, they are also a lot less likely to have to need service technicians at all. In fact, leading firms are not only seeing higher absolute levels of asset uptime but are also much more successful in improving asset uptime over the last two years, a result of increased focus on this valuable measure of service performance.

Improved customer satisfaction coupled with better service asset utilization leads to the effective management of service costs and improved service profitability. Leading firms report 23.2% levels of service margins (profit as a percentage of service revenues) when compared to 17.9% for all others. Leading firms have also been significantly more successful in improving service profitability over the last two years.

The Best-in-Class PACE Model

Aberdeen’s PACE framework is designed to highlight the key strategies and capabilities employed by Best-in-Class firms in support of their service operations. It also serves as a structured template for Industry Average and Laggard firms to improve service performance (Table 2).

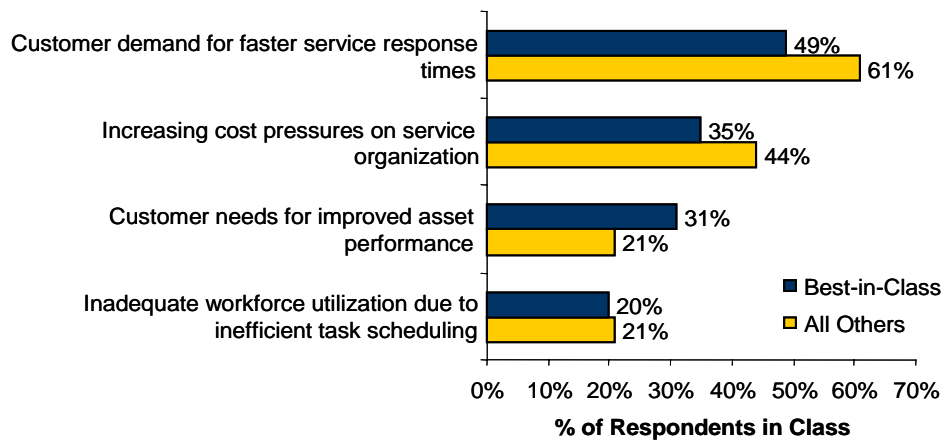
Table 2: The Best-in-Class PACE Framework

Pressures	Actions	Capabilities	Enablers
<ul style="list-style-type: none"> Customer demand for faster service response times 	<ul style="list-style-type: none"> Develop systems and metrics to track location and performance of service technicians, fleet vehicles, and other service assets Integrate location of service assets as a key parameter in schedule optimization 	<ul style="list-style-type: none"> Optimized (real-time) scheduling of technicians Real-time monitoring of technician and service fleet performance Use of geographic data to monitor product design and quality issues Alarms and alerts as assets move across designated geo fences Customer visibility into technician location and status 	<ul style="list-style-type: none"> GPS-enabled cell phones Web-enabled cell phones and handhelds In-vehicle monitoring sensors (real-time and passive monitoring) In-vehicle display or removing mapping device with traffic information GPS-enabled geo fences Location-specific performance dashboards for service executives Mobile field service solution Schedule and route optimization solution

Source: Aberdeen Group, October 2007

Service performance and cost pressures are the leading drivers for service organizations to leverage location-enabled intelligence and Location-Based Services (LBS) and these pressures are consistent across all organizations, albeit felt in varying degrees by Best-in-Class service firms (Figure 1). The key point of deviation is that leading service firms are nearly two-times as likely to consider the need to improve asset uptime as a key driver for improving service scheduling and performance. This is consistent with Aberdeen's past service research which reveals that while speed of service is key to customer satisfaction; it needs to be coupled with improved asset performance. Inherently, while a firm might be able to consistently meet two hour service fix windows, customer satisfaction may still be in jeopardy if the asset frequently breaks down and cannot be used.

Figure 1: Pressures Driving the Use of Location Intelligence



Source: Aberdeen Group, October 2007

Best-in-Class Strategies

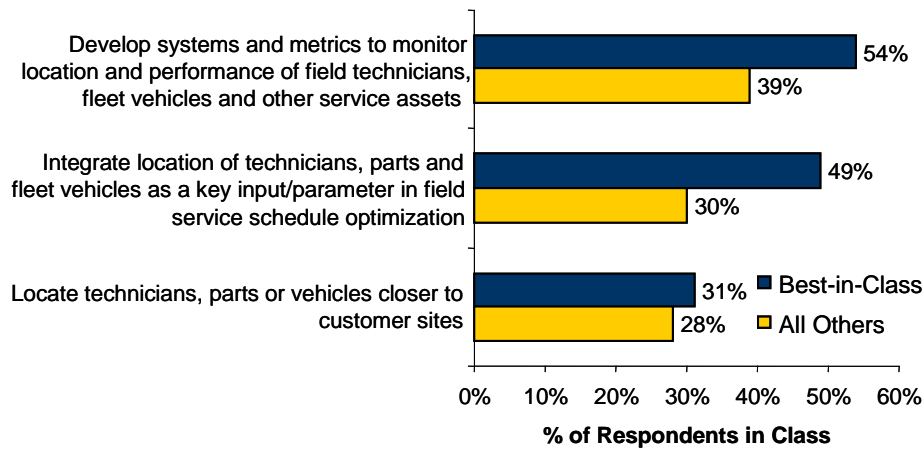
To address key service pressures, leading firms are not only actively taking steps to include location information for asset tracking or optimized scheduling but are also taking measurable actions to have systems to monitor the performance benefits attributable to location intelligence. In addition, leading firms are also leveraging location information to alter their resource allocation strategies. More than half of Best-in-Class firms are looking to develop systems and metrics so as to be able to locate their field assets as well as to measure the real-time performance of these assets. Frequent performance measurement enables firms to understand the true benefit and value of optimized service scheduling using location as a key criteria or business rule. Aberdeen's past research indicated that while leading firms understand the value of the location of key service assets in their scheduling processes, they are also cognizant that effective scheduling requires location data to be combined with other key criteria such as technician skills, technician workload, parts availability, etc. In the scheduling decision, accurate performance measurement also enables firms to evaluate the benefit of batch-based scheduling versus dynamic real-time scheduling, a decision that significantly alters processes and systems across the service organization.

Well-established systems also enable and support strategic resource allocations plans. Nearly one-third of leading companies are using location data, with regards to customer and asset whereabouts, to realign the whereabouts of their technicians, vehicles, and parts so as to improve service delivery and overall customer experience (Figure 2).

““What startled me was that we had no clue as to how many vehicles were sitting in the yard.”

~ Vice President, Field Operations, Food and Beverage Company

Figure 2: Strategic Actions to Leverage Location Intelligence



Source: Aberdeen Group, October 2007

Aberdeen Insights - Unionized Workforce Management

A potential challenge in the deployment of location intelligence is resistance from the field workforce over technician monitoring (the big brother). Of all respondents to Aberdeen's survey, only 14% of firms stated that such privacy issues are a key deterring factor towards the adoption of location-enabled technology. This is of much larger concern in firms where a large portion of the workforce is unionized. Of firms with no unionized workers (50% of respondents), 11% report the big brother issue as being a top challenge. However, in the case of firms where 50% or more of the workforce is unionized (13% of respondents), 31% report resistance to location tracking as a major challenge preventing the implementation of location-enabled technology.

Chapter Two: Benchmarking Requirements for Success

Any Return on Investments (ROI) in geospatial technology or location intelligence is dependent on the processes and systems that organizations have in place to support the technology and the increased intelligence that the technology provides.

While firms are most likely to be mindful of the total cost of technology ownership as the leading solution selection factor, proposed ROI and integration and resource requirements follow closely behind. These can be optimized via well-established processes and systems that are identified in Aberdeen's competitive assessment.

Case Study - Baltimore Gas and Electric

Baltimore Gas and Electric (BGE) delivers natural gas and electricity to homes, businesses and other facilities in Baltimore City and nine surrounding counties in Central Maryland. The company serves 640,000 gas customers using 6,000 miles of gas main within 800 square miles of service territory. It also serves 1.2 million electric customers, using 1,300 miles of transmission lines, 23,000 miles of distribution lines and 250 substations within 2,300 square miles of service territory. The company's Integrated Field Services Division, responsible for the construction, operation, and maintenance of all gas, electric, and metering infrastructure, is made up of approximately 1,500 employees who are supplemented by another 1,500 contractor employees.

In 2003, the company was looking to enhance the workload management and dispatch effectiveness for its field-based technicians and assets responsible for reactive maintenance on its gas and electric delivery systems. As such, they invested in a large mobile initiative that included the installation of mobile data terminals in the service organization's field fleet, more than 500 vehicles. The terminals provided drivers with access to schedule and work order information and also enabled the dispatch organization to view the location of the trucks through Automatic Vehicle Location (AVL) technology. This AVL initiative was undertaken for three primary reasons:

1) To develop IT systems and processes to enable a birds-eye or "sky" view of all emergency response resources. Previously dispatchers had to make decisions based on their experience and perception with regards to the best technicians to dispatch in response to an emergency. This process was inefficient as it relied on dispatchers contacting technicians by radio to see if they would be available to respond to an emergency and hindered a quick response. The new sky view enabled visibility into the location of dispatched technicians or crews, the technicians' or crews' availability status, along with the technical expertise of those technicians.

Fast Facts

- ✓ 44% of Best-in-Class firms optimize their service technician schedules in real-time using location as a key criteria, compared to 11% of Laggards
- ✓ Best-in-Class firms are more than two-times as likely as Laggards to have a senior executive in charge of service operations
- ✓ 38% of Best-in-Class firms measure service technician and fleet performance in real-time, in comparison to 16% of Laggards
- ✓ Since leveraging location intelligence, firms have seen a 13.2% reduction in fuel costs and a 13.4% reduction in overtime costs, on average

Case Study - Baltimore Gas and Electric

Based on those inputs, the right technician could be scheduled to respond to an emergency call and work order details were automatically sent to the mobile data terminals mounted in the service trucks. Since the implementation, the service organization has seen a significant reduction in its average response time to emergencies.

2) To enhance the personal safety of individual technicians and multi-person service crews. Location information is constantly available regarding the whereabouts of service crews as well as of single responders, who are on call 24x7x365 and are initially dispatched to troubleshoot reactive calls such as power outages. This enables the organization to find and reach out to stranded technicians if they cannot be contacted by cell phone or radio.

3) To provide location-stamped documentation of the whereabouts of their trucks in the case of an accident or incident.

The significant investment, of which AVL was a key component, made by the company in improving the work and safety of technicians greatly aided the change management process. Field technicians recognized and appreciated the significant technology investment being made to aid their work processes, and AVL became a readily accepted part of the technology suite.

As such, the "Big Brother" issue with regards to technician or asset tracking was a relative non-issue for BGE.

Competitive Assessment

While the aggregated performance of surveyed companies determined whether they were ranked as Best-in-Class, Industry Average, or Laggard, each class also shared several business capabilities that fall in five key categories: (1) **process** (the ability to detect and respond to changing conditions without placing additional burdens on the organization); (2) **organization** (corporate focus and collaboration among stakeholders); (3) **knowledge management** (contextualizing data and exposing it to key stakeholders); (4) **technology** (the selection of appropriate tools and intelligent deployment of those tools); and (5) **performance management** (the ability of the organization to measure the benefits of technology deployment and use the results to improve key processes further).

Companies striving to achieve Best-in-Class performance can use the following characteristics and capabilities to develop a roadmap towards reaching the upper echelon of service excellence.

Table 3: The Competitive Framework

	Best-in-Class	Average	Laggards
Process	Optimized (real-time / dynamic) scheduling of service technicians using location as a key input		
	44%	25%	11%
Organization	Senior executive oversight of service operations		
	62%	53%	28%
	Use of location data to make service outsourcing decisions		
	44%	27%	11%
Knowledge	Use of location data to monitor product design and quality issues		
	35%	19%	10%
	Resource allocation plans / forecasting based on geographic service trends		
	36%	25%	18%
Technology	Location-specific hardware currently in use		
	<ul style="list-style-type: none"> ▪ 51% GPS-enabled cell phones ▪ 23% real-time in-vehicle monitoring sensors 	<ul style="list-style-type: none"> ▪ 28% GPS-enabled cell phones ▪ 13% real-time in-vehicle monitoring sensors 	<ul style="list-style-type: none"> ▪ 21% GPS-enabled cell phones ▪ 10% real-time in-vehicle monitoring sensors
	Service-specific applications currently in use		
	<ul style="list-style-type: none"> ▪ 49% mobile field service ▪ 49% parts management ▪ 36% schedule optimization ▪ 36% fleet management 	<ul style="list-style-type: none"> ▪ 20% mobile field service ▪ 31% parts management ▪ 18% schedule optimization ▪ 13% fleet management 	<ul style="list-style-type: none"> ▪ 18% mobile field service ▪ 11% parts management ▪ 7% schedule optimization ▪ 15% fleet management
Performance	Real-time monitoring of technician and service fleet performance		
	38%	20%	16%
	Executive dashboards of technician and service performance by geography		
	36%	18%	11%

Source: Aberdeen Group, October 2007

Capabilities and Enablers

Process

Field service execution begins with the effective scheduling of technicians to address service calls, whether they be in response to break / fix requests or for periodic or preventive maintenance. As such, location forms a core pillar for leading service firms looking to get the right technician to the right site with the right parts at the right time. Schedule optimization can either be truly dynamic or batch-based, inferring schedules are re-aggregated at various points during the day. Leading firms are much more likely to be using either method of optimization when compared to all other firms. For example, 44% of leading firms use real-time optimization when compared to only 20% of all other firms. In terms of batch-based scheduling, 36% of leading firms re-run their optimization engines either once or twice a day when compared to 21% of all other firms. While real-time or batch-based optimization does not completely remove the need for manual oversight and intervention, especially with respect to exception handling, it does reduce the probability of error and inconsistency. With only 20% of leading firms relying on manual dispatch when compared to 59% of all other firms, it is evident that leading firms understand the value of schedule optimization.

“It is absolutely impossible to push 5000 cases a month and meet your SLA requirements without the assistance of a schedule optimization tool.”

~ Richard Bainbridge,
Field Team Leader,
Vodafone UK

Organization

Buy-in to new technology as well as the foresight to develop systems and processes to fully leverage the value of automation necessitates the presence of executive management responsible for service-specific P&L as well as for resource planning and forecasting. Not only are leading firms 41% more likely to have such executives in place, but these firms are also much more likely to provide them with the tools necessary to monitor the performance of their service organizations. Customizable dashboards (currently in place at 36% of leading organizations versus 15% at all other firms) that enable executives to drill down into various aspects of workforce, parts, or fleet management - or on specific geographic performance - are valuable tools that can enhance and support strategic service management.

An example of a strategic service decision that is enabled by executive visibility is one to outsource service, either by manufacturing firms to independent service organizations or by service organizations to third-party organizations. Locations of service incidents and asset failure enable a service executive to determine the viability of providing service in-house in comparison to using a third-party service provider. In the case of remote geographies, customer needs can be better met by a third-party if it is determined that service resources are better used at other, more centralized geographies. Currently 44% of leading firms are leveraging enhanced location data to make strategic outsourcing decisions when compared to only 21% of all other firms.

Knowledge Management

Forecasting and planning for future service demand, a key component in the outsourcing decision criteria can also be strengthened by location information. Cyclical demand trends in a particular location allow the service organization to preemptively reallocate technicians, vehicles, or parts. Rising demand in a particular location also assists in the decision to permanently allocate resources to particular areas, a key strategic action for leading service firms as exhibited in Figure 2. As a capability, 36% of leading firms currently use location for these allocation decisions compared to only 22% of all other firms.

A higher incidence of service calls related to a particular product or asset in a particular geography can also raise red flags as to the performance of these products or assets. Making this information available to product design and / or quality teams can enable a review and modification of the asset for that specific location, to improve reliability, asset uptime (Table 4), and overall customer satisfaction. It is not surprising therefore, that leading service firms are nearly two-times as likely as all others to share service-specific data with their design teams.

Table 4: Knowledge Management Effect on Asset Uptime

Metric (Average Performance)	Use of Geographic Data to Monitor Product Design and Quality Issues	
	Currently in Place	Not in Place
Current serviceable asset uptime	72%	69%
Improvement in uptime over the last two years	13.0%	7.2%

Source: Aberdeen Group, October 2007

Technology

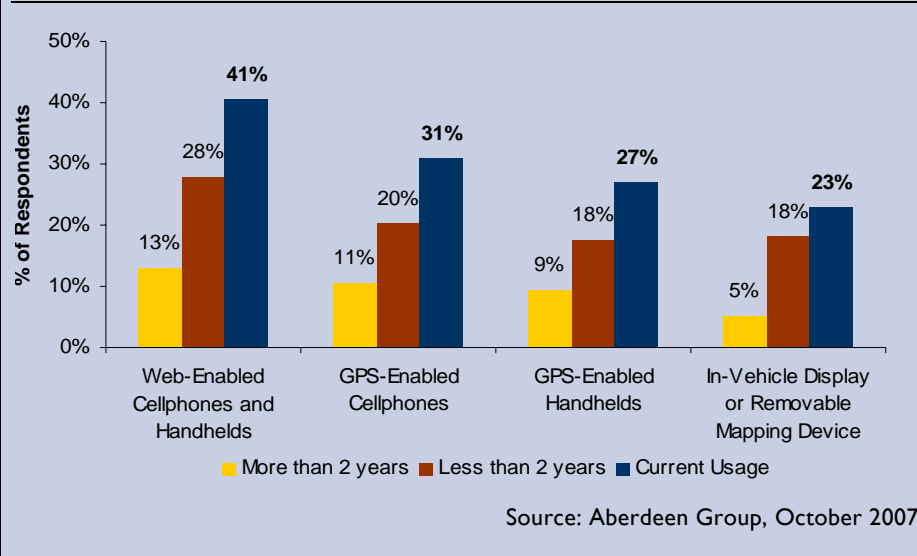
Service excellence enablers (such as real-time driving directions or geofences) actively leveraged by Best-in-Class service firms stem from organizational investments in location-enabling hardware such as GPS-enabled handhelds combined with investments in applications that allow for the transfer, aggregation, integration, and presentation of this data. As evidenced in Table 3, Best-in-Class firms are more likely to have made investments in both types of enabling technologies. While leading firms are more likely to equip their technicians with web-enabled or GPS-enabled handheld devices or cell phones, they are also more than two-times as likely as Laggards to invest in mobile field service solutions that allow their technicians to view, monitor, and close out service tickets from their handheld devices. In addition to mobile initiatives, Best-in-Class firms have also taken the lead in adoption of service-specific parts management and

fleet management solutions that actively leverage the location information from GPS, GIS, or RFID-enabled sensors or tracking devices.

Aberdeen Insights - Hardware Trends

In terms of GPS-enabled portable devices used by field technicians, adoption rates across the board are still below 50% for all companies surveyed by Aberdeen. However, adoption rates have increased significantly over the last two years and these trends continue to reveal opportunities and future growth in LBS-specific device adoption.

Figure 3: GPS-Enabled Hardware Trends



Performance Management

The metrics that leading service firms utilize to track service performance and the value of location intelligence trace directly to the pressures requiring these firms to leverage location intelligence. As such, decreased cost of service, improved workforce utilization, decreased service response windows and service times, and increased asset uptime are the key dashboards that service executives are looking for at leading organizations. In addition, leading firms are two times as likely as all others to measure and monitor these metrics in real-time.

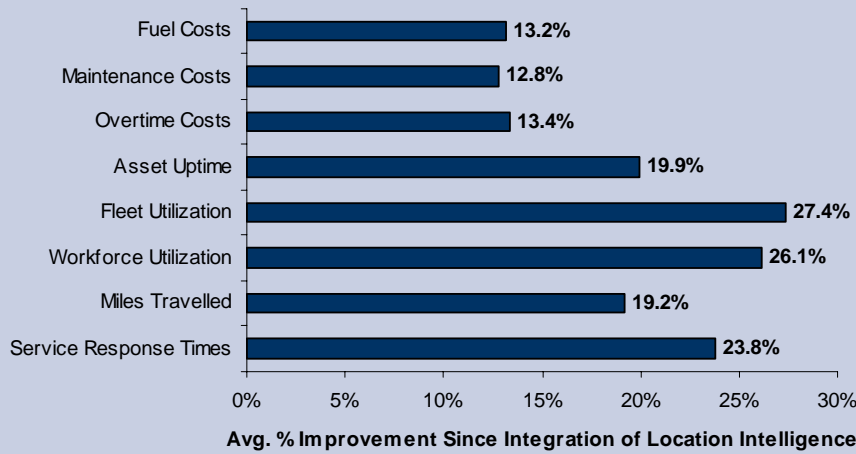
"With GPS-enabled handheld devices, our service technicians can plan routes to their customers as well as automatically receive updates and adjust service tickets. It is a major reason why our customer satisfaction level is at 98.8%."

~ Vice President,
Service and Repair,
Large Commercial Appliance
Manufacturer

Aberdeen Insights - Performance Improvements

Along the lines of key performance metrics used to track the value of Location-Based Services (LBS), firms have seen sizeable improvements since the integration of location intelligence in their field service operations.

Figure 4: Improvements Since LBS Adoption



Source: Aberdeen Group, October 2007

While these improvements equate to varying amounts for firms of different sizes and across different industries, these do amount to substantial enhancements or savings. For example, based on survey data, firms reporting reduced overtime costs equate the 13.4% reduction to an average of approximately \$496,493 since the deployment of location enabled technology.

Chapter Three: Required Actions

Whether a company is trying to move its status in field service performance, attributable to increased location intelligence, 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

- **Develop metrics and systems to track service performance**

Accurate measurement of service performance is key to understanding the value of location intelligence. Only 16% of Laggards state that they currently measure technician and fleet performance in real-time. In addition, only 23% indicated that they capture service performance data at the point-of-service. With insight into performance enhancements from technology, firms can develop a better measure for the ROI of their technology purchases. This facilitates flexibility in solution selection by reducing the sole emphasis on cost of ownership - currently the top selection criteria for Laggards.

- **Reward and provide incentive for technicians that comply with established optimized routes**

Optimized routing by taking traffic and weather conditions into account can greatly improve the speed of service delivery as well as reduce the miles traveled and other-related asset usage equipments. However, optimized routes fail to serve their purpose if they are not adopted by the technicians and drivers for whom they are developed. A strategy to increase adherence to optimized routes is to reward technicians for complying with adopted routes. Currently only 10% of Laggards are taking such steps thereby creating a large opportunity to address technology adoption. In addition, providing technicians with visibility into the operational and customer-specific benefits from optimized routing can also increase technician adoption.

- **Optimize service schedules with location as a key criteria - and implement it in phases to ease the burden on financial and IT resources**

Combining both real-time dynamic and batch-based schedule optimization, only 26% of Laggards currently optimize the schedules of their service technicians. This translates into a mere 7% adoption rate for schedule optimization solutions. While a complete overhaul from manual dispatch to automated optimization may seem daunting, there are options wherein an optimization engine, either as a stand-alone solution or as part of a broader service management system, can be implemented in phases, i.e from fully

Fast Facts

- √ Only 26% of Laggards optimize service schedules, either in real-time or via daily batches
- √ 33% of Laggards do not measure or know their current performance in serviceable asset uptime
- √ 40% of Industry Average firms are currently looking to deploy executive dashboards to monitor service performance based on geography
- √ More than a quarter of Best-in-Class firms are looking to deploy geofences to enhance asset security

manual to semi-manual to fully automated (with exception handling). The phased approach can reduce the time taken to improve scheduling processes while spreading out costs of a service optimization solution.

Industry Average Steps to Success

- **Deploy analytics and dashboards for executives to monitor service performance**

Currently only 18% of Industry Average firms provide their service executives with visibility into service performance via dashboards, compared to 36% of Best-in-Class firms. Lack of visibility hampers decision making regarding resource allocation as well as toward technology investments and is a major reason for inferior service profitability performance. However, 40% of Industry Average firms are looking to implement dashboards in the near future.

- **Share location-based service data for resource allocation and product design issues**

Use of location information for basic asset tracking barely scratches the surface with regards to the potential of location intelligence in a field service environment. Specifically, use of location data pertaining to service incidents and / or asset failures can be shared and leveraged in resource planning as well as in product design enhancements. Currently, only one-fourth of Industry Average firms use location data in their plans for future resource allocation while only 16% share location-specific service data with their product design and quality teams.

- **Measure service improvements on customer asset performance**

While location intelligence can play a key role in slashing service-related costs and improving speed of service, it is vital to measure service performance on customer asset uptime. As mentioned previously, the value of meeting a two hour service window is greatly diminished if the technician is unable to repair the specific asset. Only 29% of Industry Average firms use improved asset uptime as a key measure of service performance, compared to nearly 50% of Best-in-Class firms.

Best-in-Class Steps to Success

- **Strengthen service parts management with location information by tracking reductions in inventory storage requirements and inventory loss**

While leading firms have increased their focus on enhancing worker and fleet utilization, there is a significant opportunity to also include savings from improved parts management - a significant component

of effective service delivery that is affected by location information. While these firms are actively managing their service costs and customer uptime, only 33% of firms indicate measuring the value of location on reduced parts inventory stocking levels or reduced costs from inventory loss. Survey results show that, on average, firms have seen a 26% reduction in both parts inventory levels and inventory shrinkage since the integration of location data. In dollar values, a 26% reduction in parts inventory loss alone equates to an average savings of \$1.02 million.

- **Enable improved asset security through geo-fencing**

GPS-enabled geo-fences can serve as effective tools to accurately alert dispatchers or managers to the misuse of assets across pre-designated boundaries, without the need to constantly track each and every asset. While leading firms are ahead of all others in terms of leveraging these geo-fences for both service asset security (22% versus 9% for all others) as well as for providing customers with service technician location and status (36% versus 20% for all others), the low adoption rates still present a sizeable opportunity to Best-in-Class firms to improve asset security and customer support. This stated, more than a quarter of leading firms are currently planning to deploy and utilize geo-fences in the near future.

Aberdeen Insights - The 'Greening' of the Service Chain

In the United States, carbon dioxide emissions represent nearly 84% of total greenhouse gas emissions, according to the Energy Information Administration. About 98% of carbon dioxide is emitted as a result of the combustion of fossil fuels. So while a 19.2% reduction in miles traveled owing to enhanced location-enabled scheduling and routing can lead to a significant reduction in fuel costs, it also goes a long way in reducing greenhouse emissions, therefore enabling the protection of a different form of 'Green.' With proposed regulation looking to require the reduction of greenhouse gas emissions, GPS-enabled mileage reductions will assist in ensuring compliance with these limits and regulations.

Send to a Friend 

Appendix A: Research Methodology

Between September and October 2007, Aberdeen along with its Research Publication Partner Directions Media, examined the use, the experiences, and the intentions of nearly 330 enterprises using location intelligence and location-based solutions in field service as well as in asset maintenance environments.

Aberdeen supplemented this online survey effort with telephone interviews with select survey respondents, gathering additional information on strategies, experiences, and results regarding the use of location intelligence.

Responding enterprises included the following:

- **Job title:** The research sample included respondents with the following job titles: C-level (16%); vice president or director (28%); and manager (32%).
- **Industry:** The research sample included respondents exclusively from a variety of industries. Some of the larger industries represented were: telecom (25%); computer and office equipment (20%); utilities (12%); industrial equipment manufacturing (11%); and aerospace / defense (10%).
- **Geography:** The majority of respondents (55%) were from North America. Remaining respondents were from the Asia-Pacific region (16%); Europe, Middle East, and Africa (25%); and South / Central America (4%).
- **Company size:** Twenty-six percent (26%) of respondents were from large enterprises (annual revenues above US \$1 billion); 28% were from midsize enterprises (annual revenues between \$50 million and \$1 billion); and 46% of respondents were from small businesses (annual revenues of \$50 million or less).
- **Field Service Headcount:** Sixteen percent (16%) of respondents were from large enterprises (greater than 500); 16% were from midsize enterprises (field technician headcount between 75 and 500); and 68% of respondents were from small businesses (field technician headcount less than 75 employees).

Solution providers recognized as sponsors of this report were solicited after the fact and had no substantive influence on the direction of the *Impact of Location on Field Service* Benchmark Report. Their sponsorship has made it possible for Aberdeen Group to make these findings available to readers at no charge.

Study Focus

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

- √ The degree to which location intelligence is deployed in their operations and the financial implications of the technology
- √ The structure and effectiveness of existing GPS, GIS, or RFID implementations
- √ Current and planned use of location-enabled technology to aid operational and promotional activities
- √ The benefits, if any, that have been derived from location intelligence initiatives

The study aimed to identify emerging best practices for the use of location intelligence in field service and asset maintenance, and to provide a framework by which readers could assess their own management capabilities.

Table 5: The PACE Framework Key

Overview
<p>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:</p> <p>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)</p> <p>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)</p> <p>Capabilities — the business process competencies required to execute corporate strategy (e.g., skilled people, brand, market positioning, viable products / services, ecosystem partners, financing)</p> <p>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)</p>

Source: Aberdeen Group, October 2007

Table 6: The Competitive Framework Key

Overview	
<p>The Aberdeen Competitive Framework defines enterprises as falling into one of the following three levels of practices and performance:</p> <p>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.</p> <p>Industry Average (50%) — Practices that represent the average or norm, and result in average industry performance.</p> <p>Laggards (30%) — Practices that are significantly behind the average of the industry, and result in below average performance.</p>	<p>In the following categories:</p> <p>Process — What is the scope of process standardization? What is the efficiency and effectiveness of this process?</p> <p>Organization — How is your company currently organized to manage and optimize this particular process?</p> <p>Knowledge — What visibility do you have into key data and intelligence required to manage this process?</p> <p>Technology — What level of automation have you used to support this process? How is this automation integrated and aligned?</p> <p>Performance — What do you measure? How frequently? What’s your actual performance?</p>

Source: Aberdeen Group, October 2007

Table 7: The Relationship Between PACE and the Competitive Framework

PACE and the Competitive Framework – How They Interact
<p>Aberdeen research indicates that companies that identify the pressures with the most impact 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.</p>

Source: Aberdeen Group, October 2007

Appendix B: Related Aberdeen Research

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

- [Making Money via Mobile Field Services](#); July 2007
- [Where's My Stuff: Managing Work in Process with RFID](#); June 2007
- [Service on Time: All the Time](#); April 2007
- [Service on the Move: Driving Profitability via Fleet Management](#); March 2007
- [Mobile Field Service: 2007 and Beyond](#); December 2006
- [Location, Location, Location. Does it Matter in Field Service](#); October 2006

Information on these and any other Aberdeen publications can be found at www.Aberdeen.com.

Author(s): Sumair Dutta, Research Analyst, Strategic Service Management, sumair.dutta@aberdeen.com; Micky Long, Research Director, Strategic Service Management, micky.long@aberdeen.com.

Founded in 1988, Aberdeen Group is the technology- driven research destination of choice for the global business executive. Aberdeen Group has 400,000 research members in over 36 countries around the world that both participate in and direct the most comprehensive technology-driven value chain research in the market. Through its continued fact-based research, benchmarking, and actionable analysis, Aberdeen Group offers global business and technology executives a unique mix of actionable research, KPIs, tools, and services. This document is the result of primary research performed by Aberdeen Group. Aberdeen Group's methodologies provides for objective fact based 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.

As a Harte-Hanks Company, Aberdeen plays a key role of putting content in context for the global direct and targeted marketing company. Aberdeen's analytical and independent view of the "customer optimization" process of Harte-Hanks (Information – Opportunity – Insight – Engagement – Interaction) extends the client value and accentuates the strategic role Harte-Hanks brings to the market. For additional information, visit Aberdeen <http://www.aberdeen.com> or call (617) 723-7890, or to learn more about Harte-Hanks, call (800) 456-9748 or go to <http://www.harte-hanks.com>