

## Field Service

Themes in Automation and Empowerment

April 2012

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## Field Service: Themes in Automation and Empowerment

Aberdeen's service management research over the previous three years has tracked and revealed major trends in the field service market, pertinent to the back-office functions of scheduling, planning and workforce management, and to the field-based completion of service work by service technicians. As organizations look to unlock the puzzle to the perfect field service scenario, featuring the 'right technician at the right time with the right tools and the right customer,' they have invested heavily in improving the speed and efficiency of information flow between the dispatch organization and the field. More so, and especially particular to the Best-in-Class field service performers, there has been an increased investment in understanding field service demand and developing an appropriate response in terms of the quantity and quality of resources. As a result, these leading service organizations have seen significant improvements across the board, from productivity and response times, to customer satisfaction and profitability.

This document will touch upon some of the major trends tracked in field service over the previous three years of Aberdeen's service management research and will reveal how leading service organizations are responding to and incorporating these trends into their business operations.

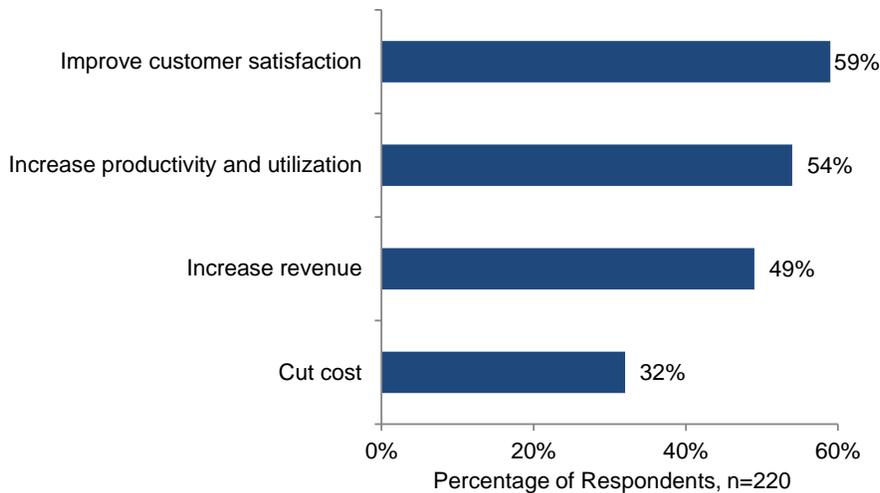
### Field Study

For service organizations, the field continues to be a major proving ground in the quest for improved customer satisfaction, higher customer retention and increased profitability. In Aberdeen's *State of Service Management: Forecast for 2012* research (January 2012), 50% of organizations reported that field service was a major area of investment in 2012. While these organizations indicated their intentions to increase their field workforce by approximately 3.1% in 2012, most of the investment is aimed at improvements in processes and technology in order to empower the field workforce. The mission of empowerment has been one embraced by the Best-in-Class over the previous three years (and more) of field service research, especially as these organizations look to lock in an enhanced connection between the back-office and the field in order to improve productivity, customer satisfaction and service revenue.

### Analyst Insight

Aberdeen's Insights provide the analyst perspective of the research as drawn from an aggregated view of the research surveys, interviews, and data analysis

**Figure 1: Field Service Goals for 2012**



Source: Aberdeen Group, January 2012

Empowerment isn't just tied to the provision of a mobile handheld to field technicians, but necessitates:

- The provision of the right information (work order, knowledge) to the service workforce
- The provision of the necessary tools and expertise to act on available information
- The removal of unnecessary and burdensome administrative processes that aren't necessary in the delivery of field service

This level of empowerment requires change in the entire field service enterprise, ranging from service leadership, field service dispatchers and all the way out to field service technicians. Along the lines of these changes, Aberdeen's research has tracked the themes highlighted in the sections to follow.

## ***In the Enterprise***

### ***Focus on Forecasting and Planning***

To augment the performance advantages offered by excellent day-to-day execution, leading service organizations are relying on longer term forecasting and planning to ensure they have appropriate resources to meet service demand. Eighty percent (80%) of leading organizations, compared to 57% of all others, give senior service leadership the responsibility to forecast future demand and develop resource plans. With a better view of future demand, the organization can make strategic decisions around workforce hiring, workforce allocation, parts stocking locations, and partner associations, to ensure the highest levels of service are delivered whether in peak or off-peak demand situations. In 2011 field service research, only 56%

of organizations indicated that they were forecasting and planning for future demand in comparison to 65% of organizations in 2012. Given the performance benefits revealed by those organizations that are planning for field service demand and consistently evaluating results, this comes as no surprise.

**Table 1: The Benefit of Performance Review**

Metric	Average Result	
	Service Planning and Quarterly Review in Place	Neither in Place
Workforce Utilization	70%	60%
First-time Fix	79%	69%
Compliance	83%	77%
Overtime	15%	22%

Source: Aberdeen Group, January 2012

### *Integration of People and Parts*

In 2012 field service research, 37% of all organizations indicated that the integration of service functions would be a strategic focus in 2012 in order to improve field service performance. Traditionally service organizations have treated field service, service parts, customer service, contract management and other disciplines as separate functional silos and focused on optimizing these functions in isolation. Optimizing service parts without considering the impact on field service may only serve to reduce overall inventories while negatively impacting first-time fix, overall cost and customer satisfaction rates. In fact, Aberdeen's research has revealed that the unavailability of parts is the top reason why service issues aren't resolved on a first-visit basis. In fact, of all field service visits that require a service part, only 42% have the actual service part in truck stock. The remaining either require a follow up visit, or additional travel to depots and stocking locations, thereby reducing utilization.

### *Developing the Right Workforce*

A technician with the right tools can still be ineffective without the expertise to resolve the service issue, or the training to take advantage of the tools provided. Leading organizations continue to invest in gaining more visibility into the status, location, and capacity of their workforce, to ensure the appropriate technicians are selected for specific tasks. Depending on the task, the right technician may not be the closest one, especially if the closest technician is over-utilized, unavailable, or lacking familiarity with a particular product. In addition, leading organizations are also taking an in-depth look at technician performance to determine optimal hiring profiles, build training regimens, and structure compensation practices. To support this development of the optimal workforce, the Best-in-Class are heavily reliant

on performance data captured internally (tied to metrics beyond productivity - see sidebar) as well as feedback mechanisms and surveys extended to their customers following service-specific sessions.

### *Collaboration with Sales*

In the focused pursuit of revenue opportunities, service and sales agents are collaborating more and more, primarily on customer information captured in the field. In field service 2012 research, 32% of Best-in-Class organizations indicated that they were looking to increase the level of collaboration between field service and sales. For these organizations, collaboration infers more than a general ad hoc sharing of account information and refers to a more formalized and frequent sharing of performance data, customer feedback and potential buying need. Leading organizations train and provide incentives to their field technicians for recognizing up-sell and cross-sell opportunities during service visits. With visibility into service trends and usage information, account managers can approach their customers with solutions that increase the value delivered to the customer while improving the revenue prospects of the servicing organization.

### *In the Field*

Seventy percent (70%) of leading organizations in Aberdeen's [Field Service 2011: Mobility and the Extension of the Service Enterprise](#) research were leveraging mobile applications for field service, when compared to 50% of all other organizations. Overall, 53% of all organizations in 2011 were using mobile field service applications of some sort compared to 51% in 2010 mobile field service data. The market for mobile applications should continue to be fairly active in 2012 and beyond, with 62% of organizations polled in 2011 research looking to build or purchase new applications or application components for their service businesses.

### *Buy over Build*

Over the previous five years, organizations have switched from developing applications in-house to purchasing tools from software and/or integration partners. As a testament to the wider availability of robust mobile software solutions, Aberdeen's data indicates a migration away from home-grown developments towards the purchase of solutions off-the-shelf. For those organizations in Aberdeen's research with solutions in place for four years or more, an equal proportion (32% each) had purchased or developed home-grown solutions. But, for those with solutions in place for less than two years, 40% had purchased mobile software compared to 16% that had developed these solutions in-house.

### *On-Premise vs. Cloud*

Field service organizations continue to evaluate the benefits of deploying cloud-based mobile applications. In 2011 mobile research, only 11% of field service organizations had deployed mobile solutions in the cloud, compared to 54% that had done so via traditional on-premise models. For a majority

#### Analyst Insight - Variable Compensation for Field Service Technicians (Percentage of Best-in-Class organizations)

- √ Individual productivity (49%)
- √ Customer feedback (41%)
- √ Customer satisfaction (39%)
- √ Team productivity (39%)
- √ Service organization profitability (37%)

#### Top 10 Capabilities Prioritized for Automation in 2012 (as seen in 2011 data)

- √ 61% View service schedule
- √ 53% View current service issue requirements
- √ 48% Access service ticket/task details
- √ 41% View past customer service history
- √ 40% Accept/reject service work
- √ 40% Close service ticket
- √ 37% Update current status
- √ 37% Record parts used and time and expense
- √ 35% Add service notes
- √ 34% View ticket summary

Note: Percentages are of all respondents who do not currently automate

of service organizations, the perceived challenges of data control, information ownership and integration complexity with back-end systems currently trump the benefits associated with the cloud. That said, 31% of organizations looking to deploy mobile solutions indicated that they were considering the cloud or a hybrid deployment strategy.

### *Charting a Course through Device Options*

As seen in Table 2, a majority of field service technicians are still carrying two devices for service work, with one device for communication and the second for managing work orders. From a communication point of view, the preference has shifted from cell phones to smart phones or rugged handhelds. The more rugged form factor devices are preferred in industries and organizations that have technicians or field workers performing tasks in hazardous or harsh working environments, thereby placing a premium on device durability.

**Table 2: Device Trends in Service**

	Average Result	
	2010	2011
Average Devices Carried / Tech	2.1	1.9
Percentage of Organizations Using Consumer Laptops	54%	64%
Percentage of Organizations Using Smartphones	40%	65%
Percentage of Organizations Using Rugged Handhelds	25%	27%
Percentage of Organizations Using Consumer Tablets	13%	20%

Source: Aberdeen Group, January 2012

From a work management perspective, there is no clear winner in terms of the device of choice. Consumer laptops continue to be popular for service work, though their dominance is being challenged by the combination of smartphones, rugged handhelds and tablets. Consumer tablets, popular within the office environment are gaining traction in field service albeit slowly, with an additional 16% of organizations polled in 2011 research evaluating their applicability in field service in 2012. It is anticipated (in 2012 Mobile research) that these devices will see the highest uptick in adoption, taking over market share primarily from laptops, but also from smart phones and other handheld devices.

The availability of consumer tablets also adds an additional wrinkle into the discussion or choice between consumer and rugged devices. In Aberdeen's 2010 Mobile field service research, the same proportion of organizations (nearly 15%), indicated making a switch from one medium to another. Those switching to rugged form factors needed a higher level of device

reliability and uptime, as governed by the nature of work being done, the mission criticality of device uptime, or the remote location of the service work being carried out rendering a quick device replacement nearly impossible. These organizations, primarily in the utilities, oil and gas, heavy manufacturing, and aerospace and defense industries, were willing to pay an initial cost premium for the reliability delivered by these devices. For those organizations that were looking for application access at a lower initial price point, the consumer devices (primarily smart phones) made much more sense. These organizations, primarily in business to consumer industries such as cable and home services, didn't necessarily need the extreme durability of rugged devices and were able to cope with the downtime associated with replacement in case the device had been dropped or rendered nonfunctional for other reasons.

While the options in 2009 and 2010 were primarily at the extremes of the durability scale, there are newer options available in 2012 that allow for organizations to acquire more consumer-oriented devices with an element of ruggedness. For those organizations looking to step up from the durability afforded by a smartphone or consumer tablet, rugged sleeves are now available that can enable a certain level of weatherproofing while also protecting the devices from a moderate drop. For those organizations looking for a slightly higher level of durability, but not at the extreme levels afforded by fully rugged devices, there are newer lines of semi-rugged handhelds that offer a higher level of protection and durability, while eliminating some of the bulk and weight. With these options, organizations can now pay increased interest to choices around form factor, and device interaction preferences, on top of the cost and durability criteria used to select field service devices.

### *Premium on Scalability and Flexibility*

Regardless of the device choice made, organizations are becoming savvy to the fact that their IT infrastructure will have to be scalable enough to account for new device types that are sure to be introduced in the coming years. This introduction could occur internally via the organization or externally via technicians and field workers looking to leverage their own preferred personal devices for service work. Currently (as seen in 2011 data) 38% of field service organizations allow their field technicians to use their own devices for field service work with 44% of organizations enforcing a strict policy against the use of personal devices. Looking into 2012, 25% of organizations indicate seeing an increased use of personal devices for field service work in their organizations, along the lines of bring your own device (or BYOD) trends seen all across organizations.

IT roadmaps will also have to be flexible enough to account for multiple mobile operating environments, eventually tied to the preferences of the field technicians operating these devices. While Windows-based operating environments continue to dominate the field service landscape, 25% and 26% of organizations respectively see an increasing use of iOS or Android-based devices in 2012. Furthermore, the introduction a new Windows

platform (planned for 2012) and further guidance (or lack thereof) around the BlackBerry operating environment will further inject the need for flexibility and scalability in field service automation roadmaps.

### *Security Matters*

In addition to considerations of scalability, IT organizations are also becoming a lot more concerned with data and device security. As important customer, asset, and service information is being accessed by a plethora of devices across multiple environments, there is a premium being placed on tracking, controlling and securing all the points of information access. In 2010 and 2011 mobile field service research, organizations rated security as a top factor (4.1- 4.3 on a 1-5 scale, with 1 being not important at all and 5 being extremely important) when determining the selection of a mobile solution. For service organizations, being secure isn't just tied to fighting off hackers looking to tap into corporate networks. It encompasses the need to:

- Minimize potential of data loss and exposure
- Minimize unauthorized access to devices or applications
- Minimize compromise of corporate networks

The loss of a work device, or a personal device accessing service applications, is a significant security threat for field service organizations, thereby leading to an increased interest in mobile device management capabilities. In 2011 mobile field service research, organizations rated device management capabilities as 'very important' (4.0 on 1-5 importance scale, with 1 being not important at all and 5 being extremely important) when considering the priorities on their mobile automation roadmap. More so, 52% of leading organizations, compared to 24% of all others, had already developed the capability to enable real-time access to all field devices in order support device management, troubleshooting and usage tracking.

### **Summary**

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When considering the perfect field service scenario of the right technician with the right tools, automation serves to enable the latter by opening up channels of communication and information flow and eliminating the time and effort expended on paperwork or redundant administrative tasks. This can be extremely valuable in driving productivity, efficiency and improving customer satisfaction.

**Table 3: Mobility to Rescue**

Number of Paper Forms / Task	Average Result	
	Prior to Deployment	Post-Deployment
Zero or One	21%	67%
Two or More	79%	33%
Average	2.6	0.8

Source: Aberdeen Group, January 2012

That said, true empowerment comes from the information that is available to all workers in the field service ecosystem and in the ability to act on and make decisions based on the information provided. Therefore, Best-in-Class service organizations aren't just investing in mobility, or field service scheduling, or demand planning solutions, but are also investing in ensuring that their field service workers have the right skills, training, compensation and motivation to take advantage of the tools and information provided. As a result, these organizations are seeing significant higher returns from their investments in automation when compared to all other organizations.

For more information on this or other research topics, please visit [www.aberdeen.com](http://www.aberdeen.com).

Related Research	
<a href="#"><i>Field Service 2012: The Right Technician</i></a> ; February 2012 <a href="#"><i>State of Service Management: Forecast for 2012</i></a> ; January 2012	<a href="#"><i>Field Service 2011: Mobility and the Extension of the Service Enterprise</i></a> ; July 2011 <a href="#"><i>Field Service 2011: Trends in Workforce Management</i></a> ; January 2011
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